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# East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 2264



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## CONTENTS

## INTERNATIONAL AFFAIRS

- CSSR Share in CEMA Trade Summarized  
(Vladislav Hamouz; HOSPODARSKE NOVINY, 19 Feb 82) ..... 1

## BULGARIA

- Exports of Technology, Know-How Examined  
(VUNSHNA TURGOVIYA, No 1, 1982) ..... 8
- Foreign Economic Policy Considerations, by Vladimir  
Yosifov
- Engineering Cooperation in Agriculture, by  
Marieta Tsvetkovska

## CZECHOSLOVAKIA

- Metallurgy, Heavy Engineering Industries Viewed  
(Jan Mara; HOSPODARSKE NOVINY, 12 Feb 82) ..... 22

## GERMAN REPUBLIC

- Crimes Against State Property, Economy Focus of Concern  
(NEUE JUSTIZ, various dates) ..... 25
- Accountability of Combine Managers, by Karl-Heinz Beyer,  
et al.
- Article by Deputy Prosecutor General, by Harri Harrland
- Widespread Thefts at Combine, by Klaus Brodfuehrer
- New Criteria Sought for Measuring Economic Performance,  
Growth  
(Helmut Koziolk; WIRTSCHAFTSWISSENSCHAFT, Mar 82)..... 42

Effects of, Official Reaction to Energy Combine Disaster Reported (Helmut Loelhoeffel; SUEDEUTSCHE ZEITUNG, 22 Mar 82).	57
HUNGARY	
U.S. Seen Hampering Poland's IMF Membership (HETI VILAGGAZDASAG, 27 Mar 82) .....	60
POLAND	
Names of Consultative Economic Council Members Published (ZYCIE WARSZAWY, 8 Apr 82) .....	61
'LE FIGARO' Assesses Polish Economic Situation (Bernard Margueritte; LE FIGARO, 30 Mar 82) .....	63
Minister Interviewed on Continuing Economic Crisis (Jerzy Gwiazdzinski Interview; ZYCIE WARSZAWY, 30 Mar 82) .....	65
Supply, Significance of Pesticides Discussed (ZIELONY SZTANDAR, 14 Mar 82, CHLOPSKA DROGA, 14 Mar 82)	69
Insufficient Attention to Pesticides, Szczepan A. Pieniazek Interview Possible Domestic Resources, by Anna Turska	
Supply of Chemicals for Agriculture Discussed (ZYCIE GOSPODARCZE, 7 Mar 82, GROMADA--ROLNIK POLSKI, 9 Feb, 3 Mar 82) .....	76
Summary of Situation Supply of Pesticides Supply of Fertilizers	
ROMANIA	
Minister Discusses Transportation, Telecommunications (Vasile Bulucea Interview; ROMANIA LIBERA, 17 Feb 82).	83
Suggestions Made for Improving Coal Production Operations (H. Pincas, et al.; REVISTA ECONOMICA, 26 Mar 82).....	87
Briefs	
Radiotransmitter for Commercial Ships	93
Participation in Joint Venture	93



CSSR SHARE IN CEMA TRADE SUMMARIZED

Prague HOSPODARSKE NOVINY in Czech 19 Feb 82 p 3

[Article by Vladislav Hamouz, official of the CPCZ Central Committee: "A Dynamically Developing Community"]

[Text] Czechoslovakia is integrated in the international socialist division of labor mainly through the system of cooperation with the CEMA [Council for Mutual Economic Assistance] member states. In 1980, the CEMA countries shared 65.5 percent of the turnover in foreign trade and the other socialist states 4.4 percent (with the nonsocialist states sharing 30.1 percent). In 1980, total exports to socialist countries amounted to almost Kcs 56 billion, of which over Kcs 52 billion, i.e., 93.6 percent were exported to the CEMA community; analogically, the CEMA countries provided 93.4 percent of all imports from the socialist countries.

By the predestination of economic and natural conditions the integration of Czechoslovak economy in the international world and socialist division of labor is based on the exchange of finished products mainly for fuels and mineral raw materials. (see tables)

The Share of the CSSR

The effect of rapidly escalating prices of raw materials in nonsocialist markets which has been in evidence especially since 1975 has distorted the share of the CEMA countries (particularly of the USSR) in Czechoslovakia's imports of raw materials, because the rate of calculated on the basis of the value volume in current prices for a given year. Therefore, as stated in the "Report on the Main Trends in the Economic and Social Development of the CSSR for the 1981-1985 Period," presented by Comrade Lubomir Strougal at the 16th CPCZ Congress, it is an invaluable fact that "even during this five-year period we shall be able to purchase raw materials from the USSR--and especially from the USSR, but also from other CEMA member states--at prices considerably below those in nonsocialist countries. The principle will continue to apply that we shall import from the USSR raw materials and materials at prices corresponding in a given year to average foreign prices in the preceding 5 years. This generous gesture of the USSR offers us the opportunity to adjust gradually to the conditions of the world market."

Our needs and potential determine in the first place the share of the CSSR as one of the CEMA founding members within this first socialist economic formation. The CSSR occupies 0.5 percent of the CEMA territory and has 4 percent of its population (not including the Vietnamese Socialist Republic). From the day of the foundation of the CEMA we have been among the economically and particularly industrially most advanced states in that community. Despite a lower growth rate, we have maintained essentially that position, as is evident from the amount of national revenue per citizen, the high rate of workers employed in our industry and the low rate of workers employed in our agriculture, from the level of our industrial production and its share of roughly 65 percent in the production of the national revenue. In 1980, the industries of the CEMA countries employed 54 million persons, of whom 2.7 million were in the CSSR (36.9 million in the USSR, 4.5 million in the Polish People's Republic, and 3.2 million in the GDR).

Other CEMA member states have been developing their economy more rapidly, whereby the CSSR was gradually reduced. Nevertheless, in the production of the CEMA the share of the CSSR exceeds 4 percent in several sectors and is higher than its share according to population. In 1980, those were the following sectors: electric power generation (4.2 percent); bituminous coal mining (15 percent); production of iron (6.8 percent), steel (7.3 percent), tractors (4.6 percent), passenger automobiles (8.6 percent), trucks and autobuses (4.5 percent), plastics (13.7 percent), chemical fibers (5.7 percent), concrete (6.4 percent), paper (8.3 percent), textiles (5.7 percent), and leather industry (8.5 percent). Other products which may be mentioned are washing machines, refrigerators, footwear, butter, milk, eggs, meat, wheat, barley, sugar beets, beer, and so on.

Even these very general data indicate that within the CEMA the CSSR acts as an important exporter and importer. It has approximately 9 percent of that community's total trade. In 1980, its per citizen exports amounted to 656 convertible rubles (the CEMA average was 292 rubles) and its imports to 666 convertible rubles (the CEMA average was 288 rubles).

#### Comprehensive Development of Relations

At present, the scientific-technological cooperation which plays a meaningful role in the CEMA proceeds primarily in the form of direct collaboration between research and scientific institutes, cooperation contracts and organization of international teams of scientists. One may say that it has already become a tradition that the scope of Czechoslovakia's participation in scientific-technological cooperation of the CEMA countries exceeds not only our share according to the number of citizens in the community but also to our total production. This is determined mainly by our domestic economic needs and for that reason, about 2,000 Czechoslovak research and development institutes, including university institutes, have joined in this cooperation.

Socialist economic integration has focused for a considerable time not only on the exchange of goods or on the achievements of scientific-technological development but also on increasingly deeper integration relations, and on coordinated joint efforts to develop national economies and the economy of

the CEMA community as a whole. Although the 16th CPCZ Congress referred to the objective necessity of integrating Czechoslovakia's economy more widely in the international division of labor, it underlined that this process is based mainly on a comprehensive development of mutually advantageous trade, economic and scientific-technological relations within the CEMA. At the same time, it referred to the development of systematic cooperation, joint pooling of resources and assets, widely expanded international specialization and cooperation and every form of cooperation under the concept of socialist economic integration, including the development of direct contacts among its organizations.

At present, the cooperation of the CEMA member states has reached a higher stage which is affected by the aggravated conditions for meeting the essential production factors and by technical and economic criteria which make high demands on the standard of the production in the processing industry, as well as by the steadily expanding economic power of the socialist community in the world. Its development in the 1980's is determined by the results of the coordinated national economic plans for the 1981-1985 period, by the long-range goal-oriented programs of cooperation among the CEMA member states until 1990, and by long-term programs for specialization and cooperation in production between the USSR and individual CEMA countries. This cooperation will be considerably affected by the decisions of the planned party and governmental summit conference on cooperation and scientific-technological policies of the CEMA countries.

During the process of coordination, major attention was focused on the cooperation of the branches of fuels, energy and raw materials, particularly where the member states had agreed to jointly expand capacities. A crucial problem still involves supplies of crude oil, natural gas and ferrous raw materials for the needs of the CEMA member states. In particular, higher deliveries of machinery and equipment will contribute to more intensive mutual exchange of products. Thus, the Bulgarian People's Republic will increase its exports of machinery and equipment to the CEMA countries by 76 percent, the Rumanian Socialist Republic by 75 percent, the USSR by 33 percent, and the CSSR by 34 percent. Furthermore, the plan calls for major increases in the trade of industrial consumer goods, amounting to +38 percent in the Bulgarian People's Republic, to +19 percent in the Hungarian People's Republic, to +26 percent in the GDR, to +19 percent in the Rumanian Socialist Republic, to +34 percent in the USSR, and to +18 percent in the CSSR.

#### Long-Term Plans As the Basis of Cooperation

The most meaningful actions in coordinating the plans are integrated in the "Contractual Plan for Multilateral Integration of Programs for the 1981-1985 Period by the CEMA Member States." It includes above all the joint construction of the nuclear power plant in Khmelnitsa, after whose completion the USSR will increase its annual deliveries of electric power to the Polish People's Republic by 6 billion kWh, to the Hungarian People's Republic by 2.4 billion kWh and to the CSSR by 3.6 billion kWh. Moreover, the plan includes the construction of a 750-kW power transmission line from the

Khmelnitsa power plant to Rzeszow, Poland, the construction of a feed yeast plant in Mozyr and other projects. According to current projections the joint construction programs will require about 2.5 billion convertible rubles.

In the contractual plan, the section on specialization and cooperation in production contains multilateral agreements on the production of computers, equipment for atomic power plants, ball bearings, tractors and agricultural machinery, digital machine tools, power-intensive as well as power-saving chemical production, etc. According to the projection, the exchange of specialized production in terms of the contractual plan will amount to 21 billion convertible rubles. Other sections specify measures for social solution of scientific-technological tasks, normalization and standardization, and economic assistance to Mongolia, Cuba and Vietnam.

The long-range goal-oriented programs for cooperation among the CEMA member states until 1990 were approved so as to supply the countries in our community with the needed fuels, energy, raw materials, agricultural and food products, industrial consumer goods, machinery and equipment, and passenger and freight transportation. These programs are conceived as programmatic comprehensive documents representing the contractual economic strategy for a joint solution of problems over a period of two five-year plans. They delineate important policies for broader application of science and technology and for accelerating scientific-technological development; by the same token, they will help bring together the CEMA member states and equalize their economic standard.

The factor of their comprehensive character appears in the form of many subprograms (about 340) containing a system of measures for the solution of individual problems and projects of cooperation, as well as in the form of pooling of funds and resources for the implementation of long-range goal-oriented programs for cooperation, and in the form of interrelated internal systems of planning with a full mechanism for cooperation in the planning of CEMA activities. The comprehensive character appears also in individual subprograms to be implemented on the basis of approximately 240 general multilateral agreements and contracts and several hundreds of bilateral interstate agreements.

The long-range goal-oriented programs of cooperation have opened for the CSSR a wide area for her economic self-assertion in the CEMA as well as in the world and for shaping an appropriate profile of economy and growth of its overall efficiency. Therefore, we expressed our interest in more than 80 percent of the long-term subprograms.

Individual CEMA member states concluded with the USSR so-called long-range programs for specialization and cooperation in production which proceed from multilateral agreements and long-range goal-oriented programs for cooperation and which enhance bilateral cooperation particularly in the sector of specialization and cooperation in production. The CSSR signed this document in March 1980 (see the article "The USSR—The Most Important Partner" HOSPODARSKE NOVINY No 2, 1982).

## Planning the Economic Conference

Upon the initiative of the CPSU enunciated by Comrade Leonid I. Brezhnev at the 26th CPSU Congress and supported by other fraternal communist and workers parties of the CEMA, member states began planning a party and state economic summit conference on coordination of economic and scientific-technological policies. Its agenda will include the main directions of the long-range socialist economic policy of the CEMA countries, coordination of that policy and key methods for intensified socialist economic integration. Furthermore, a proposal for the agenda includes problems related to the further economic development of Mongolia, Cuba and Vietnam, and problems concerning the relations of the CEMA community to third states and their economic institutions.

The proposed conceptual focus of the conference offers an opportunity to adopt a position on practically every basic problem related to future socioeconomic development in the CEMA community and to mutual cooperation of its member states. The Czechoslovak party expressed interest in the convocation of this conference at the 16th CPCZ Congress when Comrade Gustav Husak declared that "our party supports an expeditious meeting of the leading representatives from the fraternal socialist countries to deal with the fundamental questions concerning the coordination of economic policies; our party is ready to offer its contribution to crown the conference with success."



1 ZBOŽOVÁ STRUKTURA CELKOVÉHO ČS. DOVOZU A DOVOZU ZE ZEMÍ RVHP (v %)

	2 Celkový dovoz				3 Dovoz z RVHP			
	1960	1970	1975	1980	1960	1970	1975	1980
1 Stroje a zařízení	21,7	33,4	36,1	36,6	29,1	35,0	38,8	41,4
2 Potravinářské zboží	10,9	8,4	5,5	4,6	9,3	6,5	4,3	3,3
3 Spotřební zboží nepotravinářské	3,4	8,5	7,7	5,9	4,1	8,3	7,5	5,6
4 Hotové výrobky celkem	36,0	50,3	49,3	47,1	32,5	48,8	50,6	50,3
5 Paliva a minerální suroviny	27,9	23,5	27,8	31,7	29,7	30,8	34,9	38,7
6 Chemické výrobky, stavební materiály, rostlinné a živočišné suroviny	23,6	18,8	18,9	17,0	16,0	13,3	11,3	9,3
7 Chovný dobytek	0,1	0,3	0,1	0,1	0,0	0,2	0,1	0,1
8 Potravinářské suroviny	12,4	7,1	3,9	4,1	13,8	5,9	3,1	1,6
9 Suroviny celkem	64,0	49,7	50,7	52,9	57,5	50,2	49,4	49,7

Pramen: Vneshnaya torgovlya stran členov SEV v 1980 godu

Key:

1. Structure of Goods in Total Czechoslovak Imports and Imports from the CEMA Countries (In Percents)
2. Total imports
3. Imports from the CEMA
4. Machinery and equipment
5. Products of food industry
6. Consumer goods other than food
7. Finished products - total
8. Fuels and mineral raw materials
9. Chemical products, construction materials, raw materials of vegetable and animal origin
10. Breeding cattle
11. Raw materials for food industry
12. Raw materials - total
13. Source: Vneshnaya torgovlya stran členov SEV v 1980 godu [Foreign trade of the CEMA member countries in 1980]

1. ZROZOVÁ STRUKTURA CELKOVÉHO CS VÝVOZU A VÝVOZU DO ZEMÍ RVHP (v %)								
	2. Celkový vývoz				3. Vývoz do RVHP			
	1960	1970	1975	1980	1960	1970	1975	1980
1. Stroje a zařízení	45,7	50,4	48,0	50,3	48,2	59,6	57,1	63,2
2. Strojní a elektrická zařízení	3,4	2,4	3,0	3,5	2,4	0,9	1,2	1,7
3. Spotřební zboží nepotravinářské	20,4	18,6	18,2	15,9	21,1	16,0	17,5	14,6
4. Hotové výrobky celkem	69,5	69,4	69,2	69,7	71,7	76,7	75,8	79,5
5. Paliva a minerální suroviny	19,1	18,6	19,3	17,2	22,4	14,8	16,0	12,6
6. Chemické výrobky, stavební materiály, rostlinné a živočišné produkty, chovný dobytek a potravinářské suroviny	11,4	12,0	11,5	13,1	5,9	6,5	8,2	7,9
7. Suroviny celkem	30,5	30,6	30,8	30,3	28,3	23,3	24,2	20,5
8. Zdroj: Vneshnaya torgovlya stran členov SEV v 1980 godu								

**Key:**

1. Structure of Goods in Total Czechoslovak Exports and Exports to the CEMA Countries (In Percents)
2. Total exports
3. Exports to CEMA
4. Machinery and equipment
5. Products of food industry
6. Consumer goods other than food
7. Finished products - total
8. Fuels and mineral raw materials
9. Chemical products, construction materials, raw materials of vegetable and animal origin, breeding cattle and raw materials for food industry
10. Raw materials - total
11. Source: Vneshnaya torgovlya stran členov SEV v 1980 godu [Foreign trade of the CEMA member countries in 1980]

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## EXPORTS OF TECHNOLOGY, KNOW-HOW EXAMINED

## Foreign Economic Policy Considerations

Sofia VUNSHNA TURGOVIYA in Bulgarian No 1, 1982 pp 8-11

[Article by Vladimir Yosifov: "Place and Role of Technology Export in the Foreign Economic Policy of the Bulgarian People's Republic at the Beginning of the 1980's"]

[Text] The foreign economic relations of the Bulgarian People's Republic emerged as one of the most dynamic sectors in the Bulgarian economy as a whole during the 1970's. They developed at a higher rate than the country's overall economic growth. The physical volume of commerce grew an average of 8.2 percent annually, national income 6.1 percent, total industrial output 6.5 percent, and agricultural output 2.6 percent. The ratio of foreign trade to national income increased from 71:100 in 1975 to 75:100 in 1980. These figures show convincingly the importance of foreign trade for our country's development.

Machinery and equipment occupy a key place in our country's exports. Their relative share of exports rose from 38.8 percent in 1975 to 47.7 percent in 1980 and already they fully compensate for imports of this essential commodity item for the country. In the next few years these trends will grow stronger and be intensified. With the increase of the country's production capacities and with the introduction of modern, highly efficient technologies and the latest scientific and technical achievements and results, the export potential of the Bulgarian economy will grow.

The results so far have been achieved for the most part extensively by giving priority to quantitative economic and foreign trade indicators and by including in commerce material resources that are significant in terms of volume and wide range. The intellectual product's share--the "nonmaterial" part--of our exports is still small.

Such an approach would not be in keeping with the strategic course of general and all-round intensification of the national economy during the Eighth Five-Year Plan. The foreign trade sector must not permit the national income to be drained away. Hence follows the urgent task of an accelerated intensification of foreign economic relations and an appreciable rise in their national economic efficiency.

A favorable balance of payments must be achieved not only by increasing the quantities of export commodities, since our country's limited natural and human



resources impose natural restrictions along these lines, but especially by raising the quality and technical standard, by expanding the export of high-efficiency, high-science items, by expanding the volume of services concomitant to exports, and by stepping up engineering and other foreign economic activities of markedly efficient character. Here the transmission of technologies, the export of nonmaterial product, has a most important place.

The intensification of foreign economic activity cannot be achieved solely by improving the trade structure with mass commodities, by bettering their quality and technical standard, or by the traditional forms of commerce. In the next few years considerable attention will be paid to fashioning a comprehensive system of sales abroad of complete engineering and technical production systems and plants, including the planning and delivery of equipment and technologies, to the granting of rights, the assignment of key personnel, the rendering of technical assistance etc. There will be a significant increase in the export of nonmaterial, intellectual product and of goods with a higher degree of processing and "nonmaterial" component and with relatively lower production costs of raw materials and energy sources.

On the other hand, engineering and exploitation organizations will have to expand their horizons beyond the limits of their own enterprises and offer the international market the results of their intellectual activity (plans, technologies, engineering solutions and other scientific and technical achievements). In this way our national engineering and technical experience and the results of scientific research activity will have a chance at package sales abroad and will contribute to the intensification of foreign economic relations.

From the limited framework of conventional foreign trade, Bulgaria is aiming, in ever greater degree, at long-term and integrated production, at industrial, scientific and technical cooperation with its partners.

One of the most important factors affecting the efficiency of social production and the intellectualization of labor in all sectors of the national economy is accelerated introduction of scientific and technical achievements.

During the Eighth Five-Year Plan (1981-1985) the Bulgarian People's Republic will continue importing the latest high-efficiency machinery and equipment and will purchase licenses and know-how for new progressive technologies and products and for mechanization, chemization and automation in production processes.

A decisive factor explaining the rapid development of foreign economic relations is Bulgaria's active participation in the international specialization and subcontracting of production and in the widening and deepening of scientific and technical integration with the USSR and CEMA-member countries, within the framework of which a number of technologies, significant in terms of volume and scale and of decisive importance for the development of the individual sectors and their export potential, are put into practice.

The development of joint scientific research and development activity with the socialist countries and, above all, the USSR will result in more economical, efficient and purposeful use of our country's scientific and technical potential and

material resources in solving the complex scientific and technical problems in Bulgaria's economic development.

Bulgaria's active participation in scientific and technical integration has resulted in not only an expansion of Bulgarian exports as a whole, but also in an increase in the "nonmaterial" element therein; license trade and technology exchange with the nonsocialist countries will expand.

Technology exchange among the socialist countries and in their practice in relations with other countries differs fundamentally from the technology exchange practiced by the capitalist countries and, in particular, from the practice of the transnational monopolies. Technology exchange has as its purpose and serves for the fulfillment of the basic tasks facing the national economy of these countries.

What is characteristic of this process in the relations among the socialist countries is the lack of striving to realize the maximum multiple of profit from the export of any given documents, technology, know-how or use license to another socialist country. Technologies are exchanged among the socialist countries at significantly lower prices and on more advantageous terms than those usually offered by companies of the capitalist countries.

Depending on the level of economic and industrial development of our countries, technology exchange is practiced in various forms: gratuitous, as part of package deliveries, technical assistance and training of specialists, joint scientific and technical research and studies, licensing agreements, imports of specialized equipment etc. Therefore it is extremely difficult to make a quantitative estimate of the influence of technology exchange on the development of industry, but it must definitely be said that it is of decisive significance for the results of this development.

In the case of Bulgaria, technology exchange in the various forms thereof (scientific and technical cooperation with the socialist countries, specialization and subcontracting, imports and exports of special machinery, equipment, package production lines and installations, introduction of foreign production and technical experience etc.) have contributed not only to the rapid industrialization of the country, but especially also to the development of its export potential not only by virtue of the increase in high-quality goods offered for export, but also by virtue of the export of Bulgarian technologies, scientific and technical achievements, engineering and technical solutions etc.

In the 1970's the share of the country's foreign economic relations represented by technology exchange grew constantly, and that at a rate overtaking the growth of foreign trade. According to expert estimates, the moneys spent for imports of manufacturing equipment, package lines and licenses, and the use of foreign experience or so-called technological imports represent about 30 percent of the total imports of machinery and equipment, with this percentage being about 40-42 in the case of imports from the developed capitalist countries.

More and more frequently specialized high-efficiency machinery is being imported that makes possible the introduction and application of new and more efficient

technologies. On the other hand, imports of general-purpose equipment and machinery are declining by reason of the acquisition of technologies, while the general-purpose and auxiliary equipment for the new plants and enterprises in question is being supplied and in future will be provided to an ever greater extent by national industry.

The country's scientific and technical progress must not depend solely on the use and introduction of foreign experience. One of the most important factors for raising the efficiency of the import and adoption of technologies, foreign experience and licenses is the development and improvement thereof by our own efforts and the creation on this basis of new engineering and technical solutions.

A great reserve in this regard is the engineering and technical potential concentrated in engineering-and-exploitation and scientific organizations. The ordinary practice in our country when importing technologies (licenses, know-how, package lines and plants) is to leave the engineering portion to the foreign supplier so as to have maximally sure guarantees of their introduction. It is imperative that not just economic but foreign-trade and engineering organizations as well use the services of Bulgarian engineering and technical personnel to a much greater extent and that they become real engineering organizations not just in respect of exports, but in respect of imports as well. This will not only help save on foreign exchange, but will significantly raise the skills and prestige of our scientific and technical personnel.

Imports of technologies, know-how and other engineering services are several times as large as the exports thereof and this is natural for a country like Bulgaria. At the present stage it is still early to seek a balancing of technology imports and exports for the country since this would inevitably have an adverse effect on the development of our national economy under the present-day conditions of the internationalization of science, technology and the economy.

In 1980 Bulgaria's exports to the developed capitalist countries came to 1.4 billion foreign-exchange leva, with machinery and equipment accounting for about 20 percent of the commerce. Exports to the developing countries came to 1.2 billion foreign-exchange leva with the share of machinery and equipment constituting about 30-32 percent, while imports from the developing countries amounted to 0.3 billion foreign-exchange leva with a negligible percentage of machinery and equipment. The developing countries' share of Bulgaria's commerce came to almost 9 percent in 1980 as against 7.2 percent in 1978 and 7.5 percent in 1979, which indicates an overtaking rate of development of our trade with these countries.

In 1980 the share represented by the technological portion of our exports of machinery and equipment amounted to about 5 percent and, as far as exports to the developing countries are concerned, to 10-11 percent of the exports of machinery, equipment and package plants. Plans for the Eighth Five-Year Period target a significant increase in the exports of package plants, including a rapid growth in the share of the nonmaterial portion.

The 1970's and the beginning of the 1980's were a period of constant growth in the share of our country's exports represented by intellectual product and services.

There has been a remarkable increase in recent years in package plants' share of Bulgarian exports and thus in their share of technology exports. Enterprises in light industry and in the food and gustatory industries in a number of the developing countries are being built according to Bulgarian plans and with the employment of Bulgarian technologies. Technological products are exported mostly in traditional areas for the Bulgarian economy such as agriculture, reclamation projects, leather manufacture, animal husbandry and the canning industry, but recently machine building has also been making its way into technology exports. This is taking place, of course, in those production processes in which our country has a specialization within the framework of the Council for Economic Mutual Assistance, such as battery-powered and engine trucks, general-purpose machine tools and certain kinds of agricultural machinery. It is an interesting fact that the production processes in which our country made its first steps 20-25 years ago, in which our industry later specialized within the CEMA framework and which are developing very dynamically owing to this specialization, have at the beginning of the 1980's attained such development that now these technologies, know-how and production experience are supplied to the developing countries in competition with world-famous producers.

But it is not just the developing countries that are and will be the export target of Bulgarian production, scientific-and-technical and technological experience. Bulgarian technologies and know-how are also sold to and used in the most industrially and scientifically-and-technically developed countries such as the United States, the FRG, Great Britain etc.

In 1977-1980 alone receipts from the exports of licenses to developed capitalist countries increased 70 percent. And this trend will be kept up in the 1980's as well. More and more, Bulgarian exporters of machinery, equipment and electronics will supply our foreign partners with package systems solutions, will train personnel and instruct specialists.

As a rule, the Bulgarian licenses made available to foreign companies are for methods and technologies, more rarely for products.

The most favorable experience with our scientific and technical achievement is the sale abroad of the method and device for "Applying a Protective Coating to Graphite Electrodes," used in steel production. This is a classical example of almost complete exploitation of an invention. The favorable factors in the marketing thereof are diverse: the invention is the result of our research having as its purpose a reduction in the consumption of the graphite electrodes for electric-steel production that our country imports from abroad. The scientific and technical achievement was introduced in our metallurgical industry where significant economic effect was realized and at the same time valuable practical experience gained in its exploitation. In due course patents were applied for in a number of countries with developed metallurgy and steel production, which was the result of a good acquaintance with the markets and production conditions in these conditions. When granting of licenses for use of the scientific and technical achievement abroad ensued, the practical results of its exploitation in Bulgaria were available and special equipment had been designed for application of the protective coating--conditions which strengthened our negotiating position with foreign firms manifold. An autonomous unit (the Electrothermics Scientific Production Laboratory in the Kremikovtsi



MK [Metallurgical Combine]) functions to service the licensing contracts, develop the scientific and technical achievement, introduce it to foreign enterprises, back up technical negotiations and develop strategy for future use of the invention.

The results achieved in practice (receipts of foreign exchange; our licensees are well-known firms in the USSR, Czechoslovakia, Great Britain, Canada, Sweden etc.; the production of protected electrodes has been organized in the FRG by a mixed production enterprise, "Contech") show that with the right organization and properly set ultimate goals, the complete selling of a scientific and technical achievement is not a fiction, but a reality bringing the country significant economic effect--significantly higher than from the organization and export of commodity production.

The high efficiency of "nonmaterial" exports is the basic reason for the rapid development of international trade in scientific and technical achievements, know-how and other scientific and technical services in recent years. And for our country, expansion of the nonmaterial element in exports represents the intellectualization of foreign trade in practice.

The exports of Bulgarian scientific and technical achievements follow the principal commodity exports.

While, as far as the developed capitalist countries and some of the more advanced developing countries are concerned, Bulgarian exporters of know-how, scientific and technical achievements, technical experience and skills are in a comparatively unfavorable situation when the technical and technological level of the development of production in the various sectors is taken into account, yet as far as the developing countries are concerned, their position will be stronger, especially in cases where they can offer a complete solution to a given problem (scientific and technical achievement, know-how, technical assistance and the appropriate equipment)--and this is the task of the Bulgarian engineering organizations.

In the next few years the sectors whose development has been especially marked during the 1970's (electronics, electrical engineering, machine building, chemical industry) will join the traditionally developed sectors of the Bulgarian economy offering interesting and highly efficient technologies and scientific and technical achievements in the international markets (food and gustatory industries, agriculture, light industry, metallurgy and mining industry).

The first attempts have already been made to organize the assembly of Bulgarian metal-cutting machinery and battery-powered and engine trucks in Mexico, Turkey, Iran and other developing countries. The export of electric meters in parts to the developing countries is also the first step towards technological cooperation with these countries, a higher phase of economic cooperation than mere commodity trade.

The industrialization of the developing countries and the building of their modern energy, transport and other infrastructure give rise to the necessity of introducing and using control and measuring instruments and apparatuses, electronic and

electrical equipment. Many of the developing countries will begin to establish their own production of the most necessary items. The problem in the next few years is to translate into material terms our country's experience in the building of individual industrial sectors and in the development of electronics, instrument manufacture etc. during the past 10-12 years through the participation of our scientific and technical potential in organizing similar production processes in the developing countries. In this way scientific and technical cooperation with these countries will be translated into material terms and the quality of economic relations will rise.

In the future technology exchange will promote the development of foreign economic relations, especially with countries to which, due to great distances, the direct export of commodity production is difficult. Thus, technology export will contribute to the gaining of recognition for the name of Bulgarian producers in these regions.

Scientific and technical cooperation plays an ever larger role in international relations as a part of foreign economic relations. Within the UN framework, international technology exchange is of paramount importance in the solving of the problems involved in the accelerated industrial and economic development of the developing countries.

In the next five-year plan, called the "Five-Year Plan of Technical Progress," technology exchange will be given paramount importance at all levels of administration of the national economy, since this is one of the most promising and effective forms of international economic cooperation.

#### Engineering Cooperation in Agriculture

Sofia VUNSHNA TURGOVIYA in Bulgarian No 1, 1982 pp 12-16

[Article by Marieta Tsvetkovska: "Engineering in Bulgaria's Cooperation with the Developing Countries in the Area of Agriculture"; passages enclosed in slantlines printed in boldface]

[Text] Most of the developing countries have agrarian economies. Despite agriculture's great importance for them, it is often not able to feed their population because of its primitive character. Despite the efforts of the developing countries their agriculture has lagged seriously behind during the past decade, especially if the high population is taken into consideration. Grain consumption in these countries grows 2.2 percent annually. Their grain deficit in 1979 amounted to 85 million tons annually and continues to increase, while expenditures for bread grains amounted to \$17 billion and are increasing 20 percent annually.<sup>1</sup> On the African continent alone the demand for bread grains grows 3.1 percent annually, while the production thereof increases 2.2 percent; the demand for and the production of vegetables increase respectively 3.1 percent and 1.2 percent, of meat 4.4 percent and 2.4 percent, of milk 4.0 percent and 3.0 percent.<sup>2</sup> Given this situation, it is no wonder that the imports of a large part of the developing countries are oriented mainly towards satisfying the population's urgent needs of food products and consumer goods.

The backwardness of this important sector for the national economy, hindering as it does the development of their economy as a whole, compels the developing countries to give considerable space in their programs for the development of agriculture to its reconstruction and modernization and to the carrying out of agrarian reforms in order to satisfy the population's needs of food products and to assure the production of raw materials for industry and for export.<sup>3</sup>

The implementation of plans in this area, however, is hindered by various domestic and foreign difficulties. The complexity of the wide agrarian reforms that are carried out, the shortage of financial resources, the lack of sufficient experience and of skilled personnel to organize the economy etc. hamper fulfillment of the agricultural-development program. There are no fewer difficulties of an international character (unequal position of the developing countries in the world economy, their strained balance of payments, their inappropriate export structure, the rise in the prices of imported machinery and materials for the development of agricultural production).

The assistance rendered by the socialist countries is of great significance for the solution of these problems. The establishment of mutually advantageous commercial and economic relations on a long-term basis and the widening and deepening of up-to-date forms of cooperation (including the development of foreign engineering activity) afford favorable opportunities for overcoming the developing countries' economic backwardness and dependence, for increasing their export potential, for expanding commerce with these countries and, ultimately, for coordinating the national interests of the partners.

Our country also directs its efforts towards assisting the developing countries in their campaign to build a modern agriculture and to establish progressive agrarian relations. The establishment of lasting and stable foreign economic relations with the developing countries, the expansion and intensification of a mutually advantageous basis of relations with them, and the diversification and enrichment of the forms of cooperation are also incorporated in the theses of the Twelfth BCP Congress.

Bulgaria's significant achievements in agriculture elicit the interest of the developing countries. The country's experience in organizing and building farms and in devising and introducing modern organizational forms, as well as the material incentive the developing countries have in applying this experience in order to overcome the difficulties and solve the problems confronting them, opens up great opportunities for active and lasting, mutually advantageous cooperation.

To meet the developing countries' needs of engineering services in the area of agriculture, the engineering economic organization "Agrokomplekt" was set up in 1976. This specialized Bulgarian engineering organization within the National Agroindustrial Union carries out the complete survey, planning, delivery and construction of agricultural and land-reclamation projects, seed-producing and seed farms, animal-husbandry and poultry industrial combines, animal feed mills and green-houses, as well as enterprises in the food and gustatory industries. In addition to providing engineering services, this organization trains key personnel and sends specialists abroad to render scientific-and-technical and production assistance in

the area of agriculture and the food industry. In the implementation of some projects, other engineering organizations take part as well, such as "Technoexport" ISO [Engineering Economic Organization] (in projects in the tobacco industry, in the food and gustatory industries and light industry), "Technoimpex" Directorate (providing specialists), and "Trakiyaimpeks" [Thrace Impex] Engineering Specialized Directorate (in surveying, planning, delivery and construction of viticultural and wine-producing complexes and associated land-reclamation projects, and of greenhouse irrigation systems, as well as preparing general plans for the development of agricultural regions specializing in viticulture and fruit-growing).

By means of these organizations our country renders assistance not only in the development of the material and technical base of agricultural production (saturation with agricultural machinery, building of land-reclamation works and construction of various agricultural projects), but also in the creation of farms and agroindustrial complexes and the formation of a cooperative movement in countries with a socialist orientation. Cooperation in this area contributes to solution not only of the food problem, but also of a number of other problems (increase of the population's employment, fashioning of a progressive social structure, a rise in labor productivity with the use of modern methods of organization and production etc.). At the same time, the Bulgarian People's Republic endeavors to raise the efficiency of its cooperation with the developing countries by not building separate agricultural projects, but modern agroindustrial complexes, which will more comprehensively and systematically satisfy domestic needs and make possible output for export, including export to our country.

A fundamental problem that almost all developing countries encounter is the development of irrigation farming. With the great personnel and organization potential it has in the area of hydraulic engineering, the Bulgarian People's Republic gives the developing countries active assistance in implementing projected programs of /irrigation construction/ and in opening up new lands. Included here are the formulation of water conservancy schemes, surveying, planning, construction and equipping of dozens of small and large reservoirs, irrigation systems and canals in countries such as Iran, Iraq, Syria, Mozambique, Nigeria etc., and the planning and building of reservoirs and drilled wells in Libya, the People's Democratic Republic of Yemen etc. for the utilization of surface and underground water etc. All this makes possible the irrigation of vast areas, from which two crops are obtained annually in places.

After two major reservoirs, Rastan and Makharda in Syria and dozens of small hydraulic engineering projects, in 1979 Bulgarian specialists planned the Balik irrigation system. The first phase in the planning of the Kabir irrigation system in Khassaki is finished.

Bulgarian specialists devised a general plan for rational use of the water resources of Mozambique from 1977 to 2000, targeting 70-80 percent satisfaction of water needs and a growth of irrigated areas to 1.67 million hectares. The first stage in the implementation of the general plan is work on accelerated development of the Limpopo River valley, where four irrigation systems and a reservoir are under construction and 12,000 hectares are to be drained.



The land-reclamation projects make possible not only a significant increase in the arable areas, but also fuller utilization of the country's water power potential for the production of electrical energy. In the Limpopo River Basin alone the building of four power lines and four electric substations is targeted. Construction has started on the Moamba-Major hydroengineering complex, including a reservoir, a 16,000-hectare irrigation system, a hydroelectric power plant and a high-voltage transmission line.

In fulfillment of the decisions of the first session of the mixed commission for economic and scientific-and-technical cooperation, the "Agrokomplekt" ISO and the Mozambique National Water Resources Utilization Directorate signed a contract for the rendering of assistance in the planning and construction of reservoirs and irrigation systems in the Inkomati River valley in Maputo Province.

The Bulgarian People's Republic is building a number of irrigation facilities in Iraq: the 120,000-hectare Shekhamiya drainage and irrigation system, the 150,000-hectare Suwayrah drainage and irrigation system, the Iskhaki 14 system, part of the Kaiseba drainage and irrigation system, an undertaking by the joint efforts of several CEMA-member countries. In prospect is the building of irrigation systems in the Euphrates River valley and the Iskhaki 11 drainage and irrigation system.

The Nigerian cooperation program targets the building of small reservoirs, pumping stations and irrigation systems in the states of Ondo, Bauchi, Kaduna etc. In Tanzania, "Agrokomplekt" is building the 2,700-hectare Kapunga irrigation system. A national plan for the irrigation of Benin has been drawn up. A survey of Ethiopia's water resources is impending.

The Bulgarian People's Republic aims its efforts at the creation of a number of complexes (grazing-and-animal husbandry, grain-and-fodder, fruit-and-vegetable), combined in many cases with the building of enterprises for processing agricultural output. Special attention is being given to the production of the most important kinds of agricultural crops (bread grains, vegetables, fruits, oil-yielding crops). /Cooperation in the area of agriculture/ is concentrated mainly on the creation and strengthening of major farms and agroindustrial complexes, the organization of which is one of the important elements of the agrarian reform in the developing countries.

Beneficial Bulgarian-Angolese cooperation takes the form of the building of a 200-hectare truck garden in the environs of Luanda. The Bulgarian party supplies all the necessary plans, machinery, seeds, fertilizers and preparations. The contract also stipulates the provision of technical aid (managerial and performing personnel). The aim of this contract is that Bulgarian experience in building similar farms should be passed on with the direct participation of Bulgarian specialists. The construction of large-scale agroindustrial complexes to raise tobacco, fruits and vegetables is projected; these will be equipped by the joint efforts of Bulgarian and Angolese organizations. The Chimbase DZS [State Farm] has already been established, and a contract has been entered into for building a 500-hectare farm to produce soybeans, corn etc.

With the assistance of Bulgarian specialists a fruit-growing and vegetable-producing agroindustrial complex has been organized in the region of (Angur) farm. A plan has already been drawn up for a tomato-processing enterprise, too. A plan has been formulated for the creation of a grain farm on an area of 50,000 hectares of unirrigated lands.

Bulgarian specialists are rendering assistance to Mozambique farmers in raising rice and vegetables in the region of the Limpopo River where the Chokwe agroindustrial complex is under construction. In October 1981 a contract was signed for the accelerated development of the Angonia plateau and the building of the Angonia agroindustrial complex with three specialized sections (grain-and-feed, fruit-and-vegetable, and animal-husbandry). The setting up of orchards on an area of 500-1000 hectares is envisaged for the production of peaches, plums, pears and apricots for fresh consumption and for processing. A truck garden will be established to produce tomatoes, peppers, onions, garlic, string beans etc. The setting up of 300-500 hectares of vineyards and of a nursery for the production of vegetable and vine seedlings is planned. Processing enterprises (canneries, dairies, mills etc.) will develop on the basis of the output of these farms.

In Nigeria the setting up of a farm to produce bread grains is envisaged. In the State of Bauchi a mixed agricultural enterprise will be established to produce corn, soybeans, rice and other crops with the help of Bulgarian technology and under the guidance of Bulgarian specialists.

An agroindustrial complex will be established on the croplands of the Suwayrah drainage and irrigation system in Iraq. Teamwork is anticipated in improving seed production, creating a plan for fruit production in Northern Iraq and studying the possibilities of establishing vegetable farming with fully mechanized activities.

/The development of animal husbandry/, which continues to be one of the least developed sectors of their agriculture, is of considerable interest to the developing countries. In recent years with the help of the Bulgarian People's Republic a great many model state farms and scientific research centers for the improvement of breeds and for drainage of pasturelands etc. have been set up.

In the Angolese province of Huila the large-scale agroanimal-husbandry complex, set up with the help of Bulgarian specialists, is functioning successfully. Cooperation with Ethiopia in the area of agriculture comprises the modernization of poultry, sheep and swine farms; increasing the production of milk and dairy products; planning and building a dairy farm plus a milk-processing enterprise; six poultry combines with a capacity of 15, - to 150,000 laying hens; a poultry combine for 500,000 broilers in Deridava; swine complexes for 5000 swine each in Asmara and Debra Zeyt plus a feed mill; sheep complexes for 2000 ewes each in Jima, (Uora), (Fincha) etc. At the Angonia agroindustrial complex in Mozambique the establishment of dairy farms plus a milk-processing enterprise is targeted, as well as a farm for beef production. On the basis of its great experience in poultry raising, Bulgaria has assumed the commitment to build the Kigamboni poultry combine in Tanzania with a capacity of 500,000 broilers and 66,000 layers annually. In Benin a poultry combine for 120,000 layers plus a feed mill with a capacity of 5 tons per hour is under construction.

Bulgaria's assistance in organizing state farms is leading to the final elimination of the old methods of land use, to the introduction of socialist industrial relations in the countryside and to a rise in the degree of self-sufficiency of the developing countries' population in foodstuffs and in the supply of raw materials for industry, as well as to the production of agricultural output for export.

With the expansion of the practice of creating agroindustrial complexes and the intensification of the comprehensive character of cooperation in the area of agriculture, new prospects are opening up for /cooperation in associated sectors--the food industry and light industry/. Enterprises are being created to store and process agricultural output--grain elevators, cold storage plants, mills etc. Canning combines, wineries, tobacco factories, leather-working factories, textile combines etc. are under construction. Thus, for example, in Mozambique in addition to the building of the Angonia agroindustrial complex, the building of enterprises to process the agricultural output produced there is targeted--a fruit and vegetable-processing combine, dairy enterprise, grain mill etc., whose output will be used not only to meet the country's domestic needs, but also for export, including export to the Bulgarian People's Republic. In Yemen with Bulgarian participation a slaughterhouse, tomato puree factory and other food industry enterprises have been built and equipped, as well as a leather factory. With our assistance there have been built in Iran a feed mill in (Dizbad), a cold storage plant and canning enterprise in (Gamsar), and a central dairy organization in (Golneygan).

/Cooperation in the area of agricultural machinery manufacture/ plays a great role in the development of productive forces and the creation of an agriculture well equipped with modern machinery. In many countries agricultural machinery repair shops are being fitted out and plants for the assembly of agricultural machinery and for the production of agricultural implements are being built. With Bulgarian help eight repair shops have been equipped in the People's Democratic Republic of Yemen, complete equipment for two agricultural implement production enterprises has been delivered to Angola, and in Nigeria the creation of a mixed enterprise for the production of tools and implements is targeted.

Collaboration in building agricultural projects contributes not only to the development of agricultural production, but also to the creation of a school for the training of workers and specialists and to the improvement of their professional skills so that in the future they will plan and build similar projects themselves. Moreover, the scope of the engineering activity performed by the Bulgarian People's Republic in many cases also includes /the assignment of specialists and the training of personnel/. Endeavoring to make up for the sorely felt shortage of skilled personnel in agriculture, our country sends scores of agronomists, horticulturists, machine operators and other specialists to the developing countries. In the Angolese province of Cuanza Norte, for example, Bulgarian zootechnicians and veterinarians are rendering assistance in developing a new breed of cows and in setting up a state farm for its propagation. Specialists are being sent to Iraq to give technical assistance in the area of bee-keeping, the control of hothouse diseases and pests and in the aerial spreading of fertilizers and herbicides. Assistance in training key national personnel at our educational institutions has reached considerable proportions, too. Scores of Yemeni, Mozambique, Ethiopian and other specialists receive their agricultural education in Bulgaria. Here key personnel

are trained for all sectors of agriculture, including managers of cooperative and state farms.

Bulgaria's comprehensive economic and scientific-and-technical cooperation with the developing countries includes constant contacts among agricultural enterprises and enterprises of the food and gustatory industries and among scientific research institutes and experimental stations; the exchange of scientific information and documents; reciprocal missions of advisers, experts and specialists; assistance on the part of Bulgaria in organizing a number of farms and enterprises; help from the national agronomy institutes in devising training programs etc.

Cooperation in agriculture has already borne results despite the fact that at the present-day stage its structure continues to take form with more and more new dimensions and sectors of cooperation coming into being to meet the countries' fundamental interests. The significant place that is allotted to the creation of large-scale comprehensive projects attests to the progressive character of this structure. The complex and diverse problems facing the partner countries and their mutual financial interest in solving them make it imperative to establish stable and lasting relations in agriculture.

In implementing the projected programs of cooperation, however, many problems occur which hinder the development of joint production, lessen the efficiency of cooperation and prevent the rapid accomplishment of assigned tasks. Owing to their economic backwardness many of the developing countries do not possess the necessary production resources for implementing an optimum cooperative option in agriculture. Undeveloped communications, insufficient and irregular materials backup, and precarious financing due to the lack of foreign exchange and export resources hamper their participation on a reciprocal basis in the establishment of agricultural projects. Their great indebtedness to Western countries and the close tie-in of their exports with traditional capitalist markets are a significant stumbling block in the way of strengthening useful cooperation.

The representative credits granted by the Bulgarian People's Republic cover the planning and delivery of equipment for agricultural projects and cannot be used to pay for services in organizing the projects in question. The lack of foreign exchange often delays payment for services and prevents the normal flow of work on the building of projected facilities. The assignment of worthless manpower to cultivate the land, the lack of steady manpower, the need for suitable technologies for the specific conditions of the country in question, the disregard of commitments to provide specified materials backup (machinery, fertilizers, seeds, preparations etc.), the lack of an established organization to purchase agricultural output--these are some of the problems facing our engineering organizations in carrying on their activity in the agriculture of the developing countries. In some countries the existing legislation does not create conditions for us to participate effectively in bringing agricultural projects to realization.

Despite all these problems of a financial, organizational and legislative nature, there still are significant untapped reserves for expanding our foreign economic relations with the developing countries. To overcome the difficulties, programs are already being devised to render assistance in the development of agriculture



by changing the crop structure, by raising the efficiency of the croplands used, and by intensifying agricultural production without considerable capital investment.

The development of this sector of the economy, including development by virtue of the assistance rendered, creates preconditions for the further expansion of cooperation and for /new forms and dimensions/ of this cooperation to come into being. Intensification of the integrated character of cooperation in agriculture, further improvement in its structure, and a rise in its efficiency are contributing to a strengthening of forms of assistance in return for compensation. In a number of cases the engineering services performed are paid for both in agricultural raw materials obtained from the lands opened up and worked with the help of Bulgarian organizations and specialists, and also in other traditional goods and raw materials from the export list of the country in question. The abundant natural resources of many developing countries enable them to pay for the engineering services rendered them without burdening their already difficult balance of payments. Given such a tradeoff, the interests of the partners are more closely and organically coordinated and a balanced character of the obligations and of the long-term plan is assured.

The expanding scale of this mutually advantageous cooperation not only fosters the solution of the most important socioeconomic problems of the developing countries, but also contributes to the fuller satisfaction of our country's needs of agricultural and industrial raw materials. For this reason agriculture is beginning to play a larger and larger part in Bulgaria's system of economic relations with the developing countries and cooperation in this area will continue to develop in the future.

#### FOOTNOTES

1. FAO: COLLECTION AGRICULTURE 9, "La Situation Mondiale de l'Alimentation et de l'Agriculture 1978 [World Food and Agriculture Situation in 1978], ONU pour l'Agriculture, Rome, 1979.
2. FAO: COLLECTION AGRICULTURE 10, "La Situation. . .," Rome, 1980.
3. According to the directives on economic and social development of the People's Republic of Mozambique, adopted at the Third FRELIMO [Mozambique Liberation Front] Congress in February 1977, agriculture is made the basis of the Mozambique economy. Ethiopia's draft program of economic development during 1980/81-1989/90 targets expenditures of \$13.5 billion, of which the greatest share (26 percent) is earmarked for the development of agriculture. In the Democratic Republic of Afghanistan one-fourth of all capital investment goes to finance agriculture.

## METALLURGY, HEAVY ENGINEERING INDUSTRIES VIEWED

Prague HOSPODARSKE NOVINY in Czech 12 Feb 82 p 2

[Commentary by Jan Mara, official of the CPCZ Central Committee: "Metallurgy and Heavy Engineering"]

[Text] By stepped-up efforts toward the end of 1981 the Ministry of Metallurgy and Heavy Engineering fulfilled the key of its economic plan. In 1981 its production tasks were met under very difficult circumstances. A deteriorating situation had to be faced in the areas of fuels, power and material resources.

The sector of metallurgy and ore mines as well as the sector of heavy engineering fulfilled their production tasks. The VHJ [economic production units] Chepos in Brno and the Czechoslovak Aerotechnical Works in Prague failed to meet their production tasks. The most extensive shortfalls occurred in the Victorious February Works in Hradec Kralove, Kcs 99.9 million; the CKD Dukla in Prague Kcs 48.3 million; and in the Czechoslovak Aerotechnical Works in Milevsko, Kcs 21.8 million, which was one of the reasons why the plan for assortments of products was fulfilled 97.66 percent; this represents a debit of Kcs 2.9 billion in specific products, such as in particular, heating boilers made by the CKD Dukla; intercoolers, hoppers, storage tanks, chemical equipment, casting cranes, etc., from the VHJ Chepos; air-ventilating units, upright air-conditioning units, high-pressure radial valves, etc., made by the VHJ Czechoslovak Aerotechnical Works.

Total sales tasks in the consumption of products were exceeded. The lion's share in this achievement goes to the category of supplies for investment, whose planned volume was overfulfilled by Kcs 2.1 billion. For several years this indicator has been repeatedly exceeded, which shows that a responsible review is necessary to ascertain whether this is a proper development in terms of our national economic needs, since certain problems with the fulfillment of export tasks had been cropping up.

The enterprises of the Ministry of Metallurgy and Heavy Engineering fulfilled essential deliveries of excavators, long-distance belt conveyors and stowing machines for technological mining units in the Vrsany and Jiri mine pits; three turbo-sets began a trial run in the Gial Coal Overcast of the Czechoslovak Army, as did the repumping hydroelectric plant on the Cierny Vah River, and the 500 MW unit in the Melnik III electric plant completed its

trial run. Other equipment began operating in the integrated cellulose and paper works in Ruzomberok, in our largest concrete factory in Prachovice, in the large-capacity grain silo in Horni Zahori, and in the Tatra plant in Banovce. The thermal power plants in Michle, Trmice and Kosice were completed, and certain other deliveries for construction and modernization projects of the food and chemical industries were fulfilled.

The plan was fulfilled 101 percent in deliveries for the mandatory tasks of the state plan. The shortcomings included irregular fulfillment during the year; however, in some instances, there were slippages into the next year. In particular the thermal power capacities failed to receive their technological equipment, among them, for example, the Chemko thermal plants in Strazske and Tatra in Koprivnice, Brno-North II, and Kosice II.

As for the fulfillment of export tasks, the situation during 1981 was extremely complicated; orders failed to cover all of the planned volume. Some improvement took place in the second half of the year, especially at the year's end. Good achievements during November and December helped meet the vital tasks in deliveries to the socialist states and to nonsocialist countries.

Products worth Kcs 250 million above the plan were delivered for the domestic market, primarily due to the VHJ Ferrous Metallurgy and Metallurgical Reprocessing.

Considerable attention was paid during 1981 to the production and delivery of spare parts; on the whole, deliveries were overfulfilled by Kcs 123.6 million, nevertheless, in the course of the year some VHJ were struggling to fulfill their plan in individual sectors, especially as concerns spare parts for machinery and equipment for plants processing mineral materials, manufactured by the VHJ Ore Mines and Magnestie Work in Bratislava, electric locomotives made by VHJ Skoda in Plzen, wheeled vehicles for passenger transport made by the VHJ Czechoslovak Wagon Factories, and so on.

During 1981, work forces employed by the Federal Ministry of Metallurgy and Heavy Engineering were below the plan; the most critical situation appeared in the VHJ CKD in Prague and VHJ Skoda in Plzen. The ministry met the tasks in adjusted outputs at 100.7 percent, of 4.1 percent above 1980. The plan for adjusted outputs was not met by 19 enterprises. The most conspicuous shortfalls were evident particularly in the Sverma Iron Works in Podbrezova, in the Victorious February Works in Hradec Kralove, in the Kovosrot in Ostrava, in the Unicov Engineering Plants and in Prerov Engineering plants.

The fulfillment and overfulfillment of the planned tasks, along with savings of costs, helped decisively in meeting the annual target in profits. These profitmaking achievements also positively influenced the fulfillment of indicators of profitability of operating assets.

In general, supplies were almost Kcs 1.5 billion above the preceding year, mainly in the VHJ of Ferrous Metallurgy, Chepos, Kovohute and Vitkovice. However, in most cases those were presupplies of certain raw materials and materials for this year.

The Federal Ministry of Metallurgy and Heavy Engineering is focusing the tasks of its operating plan for 1982 on steadily intensified expansion and further improvement of management and efficiency.

The most urgent task concerns the fulfillment of stipulated conservation of fuels and energy resources. Consumption of all types of liquid fuels must be drastically cut and most attention must be focused on economical exploitation of electric power. The tasks of metallurgical production have been completely revised from the perspective of reduced imports of ferrous ores from the nonsocialist countries. The production of pig iron in steelworks will be stepped up by raising the share of appropriately adjusted steel waste in the charge and by recycling metal waste to the highest possible extent. As for nonferrous metals, processing of zinc waste in the VHJ Kovohute must be resolved and the technological conditions for the treatment of lead accumulators and cable waste must be met, and so on. All that indicates that every available source of domestic raw materials must be utilized to the highest possible degree.

Production of rolled materials will focus on important assortments of products, such as metal plates for electrical engineering, auto body sheets, etc. Because zinc and tin are in short supply, we must deal with cuts in the production of tin plate and galvanized plate.

For the sector of heavy engineering, the plan stipulated more vigorous development of production supplying the fuel and energy complex, with further expansion of the production of spare parts and with a more intensive growth of production of selected final-assembly sectors. For instance, the production of equipment for nuclear plants should be increased at a rate of 115 percent, the production of steam and water turbines also by 115 percent and the production of rotary machinery for electric generators by 115.8 percent.

In the consumption of production, demanding tasks have been set for 1982 with the emphasis on intensified export tasks in heavy engineering and on more efficient exports mainly of engineering and metallurgical products.

The solution of problems concerning material technological supply will be inordinately demanding this year, particularly in terms of imports from the nonsocialist countries. For that reason, considerable pressures have developed demanding its reduction.

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CSO: 2400/161



CRIMES AGAINST STATE PROPERTY, ECONOMY FOCUS OF CONCERN

Accountability of Combine Managers

East Berlin NEUE JUSTIZ in German Vol 36 No 2, Feb 82 pp 62-65

[Article by Prof Dr Karl-Heinz Beyer, Prof Dr Walter Orschekowski and Prof Dr Dietmar Seidel, Jurisprudence Section, Karl-Marx-University, Leipzig: "Prevention and Control of Crimes Against Socialist Property and the Economy." A translation of the NEUE JUSTIZ article by Harri Harrland cited in footnote 4 is published following this article]

[Text] The development and consolidation of the socialist society and the further improvement of the people's living standard are inseparably linked to the accomplishment of the economic tasks.<sup>1</sup> It is necessary to pay close attention to all the concerns and tasks that touch on the material-technical basis of developed socialism, on the expansion of this base, on its development and protection in the broadest sense. Diverse violations of the law, above all the various criminal acts, and other transgressions exert an inhibitory influence on the fulfillment of important social tasks and diminish the results of the working people's efforts which are directed toward accomplishing the principal task.

It is above all the direct attacks on socialist property and on the national economy, the negligent handling of machines, installations, equipment and processes in violation of the scientific-technical requirements, the lack of work discipline, the waste of materials, energy and working time, and the disregard for scientific-technical findings that cause economic damage and produce socially negative effects in the consciousness of certain segments of the population. Consequently, systematic and intensive control of the first symptoms of antisocial and socially harmful behavior is assuming increasing importance.<sup>2</sup>

Protection of Socialist Property and of the National Economy as a Complex Task

A more effective protection of socialist property and of the national economy will be attained once the state and social organs concentrate on the protection of the national economy against disruptions and losses. The economic strategy for the 1980's, which was adopted at the 10th Party Congress, is oriented toward focal points that also crucially affect the measures concerning protection of property and of the national economy.

Naturally, the attempts to control property crimes are not concerned with extremes: thus, while one must not try to control economic processes through criminal law, it is not permissible to remove crucial economic growth areas from legal protection. The conflicts that are still arising in the national economy must be met primarily by the development of scientific management methods, by the unity of political-ideological education work and by differentiated economic and legal measures.

As a rule, criminal law is the last resort in this process; it must not inhibit the people's readiness to take responsibility and to make decisions and it must not obstruct creative work aimed at the greatest possible economic benefit. Consequently, accountability in terms of criminal law should be restricted to cases where other means of effective control of acts harmful to socialist property and to the national economy are not sufficient.

The struggle of the enterprises and combines against any violations of the law is inseparably linked with their tasks in the economic sector, with skillful management, planning and stimulation and with the strict control and accounting of economic results and performance. In this respect, the managers and all working people bear increased responsibility in that they must carefully examine all their decisions and actions so that in regard to society as a whole the best possible socialist effect is produced. The responsibility for society as a whole compels the individual enterprise or combine to look beyond its own interests and to produce results that affect the entire national economy. Thus the comprehensive protection of socialist property and of the national economy in the enterprises and combines begins with the decisions on the future economic effectiveness in the planning and management process, on investments in accordance with the standards established at the 10th Party Congress, on the development and the accelerated social utilization of scientific-technical progress and on the efficient use of energy, materials and time.<sup>3</sup>

There is a great variety of criminally relevant forms of encroachment on socialist property and on the national economy--ranging from "conventional" violations with the object of personal enrichment to fraudulent manipulations and serious violations of the planned economy (e.g. arrears in exports caused by simulation of plan fulfillment, economic losses caused by negligence and documentation errors, manipulation of the innovation system through simulation of performance, economic losses caused by breakdowns and other disruptions, and impairment of the consumer supplies on account of economically uncoordinated production shifts or stoppages).

It goes without saying that the "conventional" attacks on socialist property must not be underrated. The ambitious economic targets presuppose strict observance of the law on the part of all people and on the part of the managers in particular. Under conditions of extremely high economic performance requirements, the requirements concerning management performance are raised as well, and in the decision-making process it is necessary consistently to be guided--on the basis of the law and all other regulations--by the interests of society as a whole and resolutely to expose and oppose all criminal offenses against socialist property and the national economy.<sup>4</sup>

To implement our economic policy under the conditions of an intensified confrontation policy on the part of aggressive circles of the imperialist system, it is imperative strictly to uphold legality, order and security and to work toward more

effective prevention and control of violations of the law in regard to the national economy.

### Prevention of Economic and Property Crimes

The key problem in regard to prevention and control of criminal acts in all socialist enterprises and combines is to safeguard the unity of economics and ideology and closely to link production to the upholding of discipline, legality and security. Thus the intraplant and intracombine management and planning aim to incorporate the tasks concerning consolidation of socialist legality in the promotion of the workers' and collectives' plan fulfillment initiatives. As the development of socialist democracy in the enterprises and combines becomes assured, the prevention and control of crime comes to be an integral part of socialist management activity.

Thus prevention is increasingly coming to be the main trend and the predominant form of struggle against criminality. It fully conforms with the objectives and the humanist nature of socialism. Good results have been produced by those enterprises and combines in which the efforts toward recognition as "collective of exemplary order, discipline and security" are utilized for the prevention of violations of the law:

For many years, enterprises under the jurisdiction of the Ministry for Heavy Machine and Installation Building have achieved positive results in insuring a smooth reproduction process; in these enterprises, the unity of economic performance evaluation and evaluation of all problems concerning order, discipline, security and legality is safeguarded in the entire management work.

To adduce a few examples: To insure full development of the economic capacities, socialist competition is set up in accordance with the following criteria of accountability:

- Plan and contract fulfillment;
- accident and breakdown rate;
- losses caused by fire and accidents;
- serviceability of the installations to be monitored; full utilization of the shift periods;
- warranty costs and costs of refinishing work and rejects;
- cost overruns and extrabudgetary interest;
- nonproductive shifts;
- losses of socialist property; inventory differences;
- observance of the cost limits.

In other enterprises and combines, positive results have been achieved through the "Legality, Order, Security and Discipline" work teams. As an organ of the director, this type of work team is entrusted with supporting the director in the discharge of his responsibilities concerning prevention of violations of the law, elimination of the causes and conditions giving rise to these transgressions, initiation of the requisite measures against violators of the law and rehabilitation of the citizens released after serving their prison term.

In their respective fields, the directors of the enterprise's individual structural units bear the responsibility for observance of the law and for instruction in

lawful conduct. In work regulations and intraplant documents, this responsibility has been more closely defined in accordance with the specific conditions in the enterprise. Within the framework of the director's regular reports concerning the plan fulfillment and the results of the socialist competition (Article 24, Sections 2, 27, Paragraph 3 of the Decree on the State-Owned Combines, Combine Enterprises and State-Owned Enterprises of 8 November 1979 (GB1. [LEGAL GAZETTE] I, No 38, p 355)), special attention is directed to the problems concerning order, discipline, security and legality. Reports are made not only within the individual socialist enterprises and combines; reports are also submitted to the superior organs and to the local representative bodies and their organs. These reports cover measures concerning the prevention and control of criminality and other violations of the law; they also deal with the offenses committed by employees inside and outside the enterprise, with the effectiveness of the preventive measures in the enterprise, with the cooperation between the plant director and the social and management organs in the enterprise and the state and social organs outside the enterprise, and with new tasks in regard to the prevention and control of criminality and other violations of the law.

The intensification of scientifically organized preventive work in the socialist enterprises and combines imposes greater demands on the superior economic management organs. In accordance with Article 3 of the Criminal Code, these organs have the task

- to train the employees to exercise great watchfulness in regard to hostile machinations and not to tolerate violations of the socialist laws;
- to maintain continuous supervision over the preventive measures necessary in their jurisdiction and to be informed on the offenses committed and on the damages caused;
- to support security conferences and to prepare drafts for the plant director's instructions concerning enforcement of the law;
- to guide the enterprises in their collaboration with the local representative bodies and their organs.

Effective preventive work presupposes systematic strategic orientations for the management work in enterprises and combines. Aside from integration of these tasks in the plant management and planning, it is necessary better to prepare the work collectives for discharging their responsibilities in regard to the upholding of order, discipline, security and legality.

The economic accounting must be consistently implemented so as to develop the control of the reproduction process through economic means into an instrument of preventing and exposing economically relevant violations of the law.

To insure all-round observance of the socialist laws in the enterprises and combines, every director must strictly enforce material and disciplinary accountability, combat lapses, irregularities and other transgressions, oppose all kinds of criminal threats and check attitudes detrimental to discipline. The causes and conditions underlying violations of the law must be exposed and concrete measures must be taken toward their elimination.



## On the Prosecution of Property and Economic Crimes

In keeping with the diversity of the crimes against socialist property and against the national economy, the measures taken in connection with the various forms of penal accountability are quite differentiated. Offenses against socialist property are for the most part treated as misdemeanors by the social courts or as offenses not entailing detention (release on probation or imposition of a fine). In every case, the objective is to insure an appropriate social or public response, for minor property offenses that are not punished may ultimately lead to commitment of more serious offenses. Due to the increased social activity of the work collectives and the improved cooperation between the organs entrusted with the administration of justice and the local state organs, enterprises and combines, the release on probation has proved increasingly effective. Aside from the release on probation, fines have frequently been imposed for property offenses as a sentence not involving detention.<sup>5</sup>

Prison sentences are imposed primarily in cases involving great damage, in cases characterized by sophisticated modes of operation and--in a differentiating fashion--in cases against members of labor-sharing associations formed for the purpose of repeated commitment of property offenses and, finally, in cases against recidivists. Rigid value limits in regard to the amount of damage have not proved effective as delimitation criteria. In its jurisdiction, the Supreme Court has elaborated the principle that the differentiation rules must always be observed in all their complexity.<sup>6</sup>

Exposure of all offenses against socialist property, above all serious crimes and crimes involving sophisticated modes of operation, makes heavy demands on the investigative organs, on the control and financial organs, on the work collectives and other social forces and on the quality of the economic management work itself. The fact that frequently serious offenses against socialist property were continued for many years shows that it is necessary to intensify the effort toward exposure of such practices. Exposure, solution and consistent punishment of serious property offenses is of great importance--both on account of the extent of the damage caused and on account of the influence on effective control of the so-called minor property offenses. Beyond the individual case, just and effective punishment of every offense is of great importance in regard to the preventive work in all sectors. In this regard, the investigative organs and the organs entrusted with the administration of justice must accomplish the following tasks in close collaboration with the enterprises and combines:

- Accurate determination of the damage caused, of any other economic effects, of the mode of operation, of the means and methods employed, etc.;
- thorough examination of the guilt question, with due regard for the degree of responsibility (including the underlying attitudes and motives);
- clarification of the offender's financial circumstances, not least from the point of view of restitution as a precondition for the effectiveness of penal accountability;
- determination of the causes and conditions underlying the offenses, including the role of the respective work collective, the situation in the respective locale

and the quality of the enterprise or combine management activity in relation to the offense.

Exposure and solution of all offenses against socialist property and against the national economy and the safeguarding of a high degree of effectiveness of the measures to be taken in connection with penal accountability necessitate systematic cooperation on the part of the enterprises and, in particular, on the part of the state directors, the work collectives and the social organizations. The management of an enterprise, in which an offense has been committed, must draw the appropriate conclusions. This in turn calls for systematic information and support of the enterprises by the organs entrusted with the administration of justice. The effectiveness of measures concerning penal accountability depends on the work within the individual enterprise in collaboration with the organs entrusted with the administration of justice. This applies also to the effectiveness of the execution of the sentence and to the rehabilitation. Experience has shown, however, that effective work in the enterprises and combines is best assured if the legal proceedings immediately follow the offense and if the proceedings are convincingly conducted before an appropriate audience. In addition, it is necessary to take measures--along the line of systematic legal propaganda--toward prevention of violations of the law.

Further improvement of the effectiveness of penal accountability is inseparably linked with its further development and differentiated implementation. Above all, it is necessary to intensify the educational effect in regard to the future conduct of the delinquent and in regard to the environment of the offender and the offense. The penal consequences must be in accordance with the severity of the offense. Thus, in socialist criminal law the considerations concerning the proportionality of offense and punishment are determined by aspects totally different from those of the criminal code of the capitalist states. Due to the political-ideological, economic and social position of man and due to the educational capacities of the collectives, in the socialist system questions concerning responsibility are viewed as part of the community and thus integrated in the overall social framework.

Strict enforcement of the principle of individual penal accountability in the case of deliberately caused damage or dangers in the national economy is an objective requirement of the socialist state and of its laws. This requirement is protective and at the same time educational and it aims consistently to further the accomplishment of the principal task. In this connection, it should be pointed out that trifling cases must not be dramatized, while serious offenses must not be minimized. Thus it is always necessary to examine whether from a social point of view the individual in question has made the necessary decisions in accordance with the economic requirements. Alleged economic requirements of the enterprise, which frequently are adduced to substantiate certain measures, are seen to be irresponsible actions when the conferred rights and assigned responsibilities are abused or--from the point of view of society as a whole--not responsibly discharged.

We feel that in connection with the facts constituting breach of trust (Article 165), the Criminal Code Commentary is correct in stating that the holder of a position of trust is obligated "to make decisions or take steps--and to forgo the contrary ones--that aim to improve the effectiveness of the economic activity of his or her enterprise or field..., including the obligation to use the available material and financial means as efficiently as possible and to prevent any waste.... A

decision that--even though it is permissible--runs counter to the principles of profitability or the financial interests of socialist property may constitute abuse of trust."<sup>7</sup>

In its judgment of 15 January 1981 (2 OSK [not further identified] 19/80, NEUE JUSTIZ, No 5, 1981, p 237) on damage inflicted on the economy, the Supreme Court stated that in the case of severely damaging offenses, when the offender's guilt is especially pronounced and when the consequences of the offense are extremely severe, it is necessary--even though the offender's character may otherwise be considered relatively positive--for the sake of protection of the society and in the interest of the decision's requisite effectiveness to impose a prison sentence that in regard to its length takes these circumstances into account.

#### Some Research Tasks Concerning Improvement of the Effectiveness of Socialist Criminal Law

In the realm of the national economy, the socialist criminal law must help insure that the state decisions, legal principles and social objectives of the uniform economic and social policy are consistently implemented and enforced in such a way that the highest possible social benefit is assured. This applies to the unconditional adherence to the tasks and goals set and to the constructive, creative and flexible accomplishment of these tasks. In this regard, high standards are established in regard to the directors' and workers' responsibility and readiness to take responsibility so as to fully utilize the advantages of the socialist planned economy for the implementation of the principal task.

An objective requirement in regard to the further development of the advanced socialist society is the accelerated implementation of scientific-technical progress, above all in regard to the solution of the "crucial problems concerning the efficiency of our economy."<sup>8</sup> In this connection, the socialist criminal law must pose and answer anew a number of fundamental questions, e.g. the question concerning the social danger or antisocial nature of decisions in connection with abuse or irresponsible conduct during its accelerated implementation, the question concerning the nature and the criteria of irresponsible actions in connection with erroneous economic decisions, the question concerning the regulation and protection requirements that emerged or are emerging during the scientific-technical revolution, the question concerning the necessity in the legal approach to potential criminal attitudes more fully to consider scientific-technical and other patterns.

In the accelerated large-scale implementation of scientific-technical progress, there arise dangerous modes of behavior which may not cause material damage and which we feel call for a more strongly differentiated evaluation. On the one hand, this concerns the stricter enforcement of penal accountability in the case of deliberate creation of acute danger situations and thus the question of a more differentiated application of the dangerous offense categories (e.g. those applying to the field of general security which are also closely related to the protection of the national economy) that strike a "bridge" between the violation of scientific-technical and technological rights and responsibilities and the prevention and control of these irregularities (also in terms of criminal law). On the other hand, one must not overlook the fact that certain scientific-technical processes are immanently bound up with dangers that must be socially and legally accepted. All this shows that the significance of technical norms, principles and behavior

parameters is steadily increasing and that it has a differentiating effect on the penal realm. This is by no means a question of schematic extensions of penal accountability. Rather, it is necessary objectively to register violations of the law in that realm in which scientific-technical progress is effected.

In our view, it is necessary more closely to define concepts of socialist criminal law such as "responsibility," "guilt" and "accountability" in accordance with the specific requirements of economic management and decision-making activity under present conditions. This applies to both the principles and the interpretation of concrete definitions of deliberateness and negligence, which require more specific definition especially in regard to creative management decisions. In close connection with the evaluation of the technical-objective considerations underlying the decisions, the attitudes, motives and value orientations of the perpetrators are of greater importance here as compared to other offense categories.

In connection with economic, scientific-technical, technological and other decisions of directors and other working people, the circumstances and criteria that mitigate, offset or even rule out the punishability for causation of economic damages or dangers assume special importance. Thus it is one of the tasks of jurisprudence in the field of criminal law to define the various types of justification, guilt exclusion, the elements of exemption from punishment or culpability and the exact criteria for their application. We feel that in this regard the present Article 169 of the Criminal Code (economic and development risk) can be considered a model.

Likewise, it is imperative that the jurists in their research work elaborate the criteria for correct differentiation that result from the scientific-technical development processes and that contribute to the adequate understanding of scientific-technical progress from the point of view of its legal protection and its development as a legal problem.

#### FOOTNOTES

1. See E. Honecker, "Report of the SED Central Committee to the 10th Party Congress," Berlin, 1981, p 136; E. Honecker, "Report of the Politburo to the Third Session of the SED Central Committee," Berlin, 1981, pp 24 ff.; Law on the Five-Year-Plan for the Development of the GDR Economy from 1981 to 1985 of 3 December 1981 (LEGAL GAZETTE, No 35, p 405).
2. J. Streit, "Tenth Party Congress--Compass for the District Attorneys' Work in the 1980's," NEUE JUSTIZ, No 6, 1981, p 243.
3. E. Honecker, op. cit., p 80.
4. See H. Harmland, "Improve the Effectiveness of the District Attorney's Overall Legal Supervision," NEUE JUSTIZ, No 1, 1982, p 7.
5. See H. Keil and S. Wittenbeck, "Improve the Social Effectiveness of the Prosecutor's General Control over Adherence to the Law," NEUE JUSTIZ, No 7, 1979, p 299; regarding the preconditions for the imposition of fines, see A. Arnold and H. Mathias in NEUE JUSTIZ, No 1, 1980, pp 15 ff.



6. See H. Keil and S. Wittenbeck, op. cit.
7. See "Kommentar zum Strafgesetzbuch" [Criminal Code Commentary], Berlin, 1981, p 418 (footnote 4 on Article 165).
8. See E. Honecker, "Report of the Politburo...", op. cit., p 31.

Article by Deputy Prosecutor General

East Berlin NEUE JUSTIZ in German Vol 36 No 1, Jan 82 pp 7-9

[Article by Dr Harri Harrland, GDR deputy prosecutor general: "Developing More Effectively the General Control by the State Prosecutor Over Adherence to the Law." A translation of the article by K Brodfuehrer cited in footnote is published following this article. A translation of the article by Harrland cited in footnote 3 is published, together with another article on economic crimes, in JPRS 78942, 10 Sep 81 No 2171 of this series, pp 27-37]

[Text] The resolution--affirmed at the 10th SED Congress--further to consolidate the socialist legal order implies higher requirements concerning the effectiveness of the public prosecutor's General Control over Adherence to the Law.

The Party Congress worked out the increasingly important role and the strong influence of the law on all aspects of the life of society and of every citizen.<sup>1</sup> It was emphasized that the consistent enforcement of the law as an integral part of socialist management activity is "an unconditional and primary task of all state organs, combines and enterprises, of their leaders and collectives and of all working people."<sup>2</sup> Increasing the contribution to the all-round enforcement of this principle is one of the most important tasks of the state prosecutor's control over adherence to the law in the 1980's.

To meet the high requirements, we must be even more active, energetic and creative in our efforts to achieve concrete results in the consolidation of socialist legality. Above all, this means that we must do our utmost to develop in every leader and in every work collective fighting positions and attitudes that are in accordance with the requirements of socialist law. Thus we must even more offensively wage the struggle against violations of the socialist laws. We must still more consistently see to it that exposed transgressions are immediately eliminated, that the culprits are identified and held accountable in accordance with the legal regulations and that the damage inflicted on socialist property is immediately compensated. The directors of state and economic organs, combines, enterprises and institutions, the board members of cooperatives and the administrators of social organizations should be urged to assume full responsibility for the enforcement of socialist legality and for the safeguarding of order and security and conscientiously to discharge the pertinent responsibilities.

It will be necessary to exercise greater strictness in following up on any signs of transgression of the law and to direct close attention to the safeguarding of the citizens' rights. Every worker must feel that he or she can depend on the general applicability of the legal regulations of the socialist state and that he or she is assured of protection against violations of the law.

## Increased Influence on the Consolidation of Legality

Reviewing the results of our work in preparation for the 10th SED Congress<sup>3</sup> and in regard to the implementation of its resolutions, one notes that the state prosecutor's influence on the consolidation of socialist legality has been growing. It is above all the state prosecutor's activities in connection with getting to the bottom of any sign of violation of the law that have been intensified considerably. Further qualitative advances in this respect are feasible primarily through elimination of the differences in standards that still exist in various kreises and bezirks [GDR administrative units].

The activities are characterized by a markedly increased consistency in the enforcement of the individual penal accountability in regard to transgressions of the law and breaches of discipline. In more than one-fourth of the pointers and protests submitted by the state prosecutor's office, the disciplinary, penal or material accountability of the culprits was enforced.

One should also emphasize the increased efforts--in the preparation for and in the execution of control measures--to cooperate more systematically with the SED's base organizations in the respective enterprises and institutions so that unequivocal political-ideological positions are assured in regard to the evaluation in work and management collectives. Similarly, the practice to inform the leading party organs in kreises and bezirks of pertinent protests by the state prosecutor's office has proved successful. Many of the SED's kreis and bezirk administrations utilize this information for the systematic political-ideological education work in the respective region.

At the same time, in connection with censured transgressions, the state prosecutors have intensified their efforts to conduct offensive discussions in work and management collectives. It is being recognized more and more clearly that it is necessary to apply to public morals the lessons learned from violations of the law and that it is inappropriate to hold "behind closed doors" evaluation sessions with the individuals responsible.

Much better use has been made of the possibility of inducing--in connection with control activities on the part of the state prosecutors--superior management organs more conscientiously to discharge their responsibility in regard to control over adherence to the law. In this regard, the improved flow of information--combined with appropriate control measures--from the kreis state prosecutors to the bezirk state prosecutors and from the latter to the GDR Prosecutor General has produced positive results.

Finally, systematic follow-up controls in enterprises and institutions, against which control measures had to be taken on account of serious offenses, have helped to make the state prosecutors' control more effective.<sup>4</sup> The practical experience and the certainty that the state prosecutor will "not ease up" is apt to make management personnel in particular pay close attention to strict observance of the legal regulations in their jurisdiction. Moreover, such controls help to provide greater clarity as to the fact that a protest or pointer by the state prosecutor is not the end, but the point of departure in regard to consolidation of legality in the respective sector.

In this connection, however, it is necessary more closely to examine and consider a number of questions. This applies to the oft-quoted view that every control measure must be followed in due time by a follow-up control. In the face of the given circumstances, this view cannot be upheld: Firstly, there are quite a few control measures whose sole aim is to eliminate non-recurring violations of the law, while in every other respect observance of the laws in the sector in question is quite satisfactory. Secondly, one must refrain from paying merely pop-in visits to the respective sector. Insufficient thoroughness on the part of the state prosecutor would result at the least in ideological setbacks that cannot quickly be offset. On the other hand, systematic and complex follow-up controls in accordance with the selection principle--such as were carried out last year with the participation of experts of control and revision organs--have proved quite effective. To be sure, the ratio of effort to benefit obtained must be critically evaluated. One may ask the question, for example, if it is expedient to include in such follow-up controls members of revision organs from institutions that are placed above the enterprise in question. At any rate, one should take care not to mix the different responsibilities.

#### Furthering the Accomplishment of Economic Tasks Through Consolidation of Legality

In view of the magnitude of the task set by the 10th SED Congress--the task to insure execution of the primary task through increased economic performance--it is necessary to attain a qualitatively higher level in regard to the state prosecutor's General Control of Adherence to the Law. In this respect, the primary objective is to expand the prosecutor's role in regard to the implementation of those legal regulations that are oriented toward insuring accomplishment of the key economic tasks.

The 10th Party Congress made it clear that the consolidation of socialist legality is an inalienable precondition for the accomplishment of our economic projects in regard to the further organization of the developed socialist society: "The conscious utilization of the socialist laws and their implementation serve the strict upholding of order and security; above all, they must be directed toward preventing all kinds of violations of the law. This is a key factor in regard to insuring systematic and smooth economic operation, protecting the life and health of the working people and guaranteeing the inviolability of the people's property."<sup>5</sup>

At all levels, the principal task of the state prosecutor is and remains to demonstrate and enforce adherence to communist principles and steadfastness in the protection of the interests of society as a whole as articulated in the universally binding legal regulations. This includes the duty to intensify the struggle against all illegal manifestations of mismanagement and waste, against violations of state and work discipline. The state prosecutor's General Control over Adherence to the Law must intensify its efforts toward establishing everywhere a strong sense of responsibility and concrete accountability in regard to the damage inflicted on socialist property and in regard to expanding the role of the management organs and of the economic cadres in the consolidation of legality. In this respect, any enterprise-oriented or locally restricted approach to the universally binding legal regulations must be resolutely opposed and no concessions should be tolerated. Rather, one must proceed from the assumption that particularly in the case of extraordinary economic performance requirements, the management forces in the state and in the national economy are subjected to the exacting demand in their

decisions and measures based on the laws and other legal regulations consistently to observe the interests of society as a whole. More than ever, the resolute struggle against deviations from the law, which by their nature constitute disregard for the interests of society as a whole, is an absolute necessity. Strict observance of legality, a high degree of order, discipline and security--these are key factors in the effort to produce better results in the execution of the great, frequently novel economic tasks.<sup>6</sup>

#### Requirements Concerning the Further Improvement of the Effectiveness of the General Control over Adherence to the Law

The ambitious goal to improve the effectiveness of the prosecutors in regard to insuring socialist legality calls for thorough deliberations and for a critical approach to their own work. All those state prosecutors and their collectives, who have taken up genuine fighting positions in this regard, are well advised. In view of the considerable demands on the state prosecutor's control in regard to the further stabilization of legality, such a militant attitude is indispensable.

The primary objective is intensively to implement the proven unity of legal prosecution, control over adherence to the law, and public information work, further to improve this unity and more than before to make the general application of the best results the point of departure of all activities regarding the prevention of offenses and other transgressions of the law.<sup>7</sup> Upon closer examination, one realizes that frequently this principle is only formally observed. It still happens that even in the case of serious offenses against socialist property and against the national economy control over adherence to the law is considered only after the termination of the investigations. In such cases, the investigations were not from the outset based on a well-thought-out conception; consequently, the investigation results and the evidence supporting the control measures were insufficient. But it is especially on the degree of clarity in the elaboration of penal accountability and on the extent to which the delinquent is held accountable that the effectiveness of the prosecutor's role in the political-ideological education work depends. In this regard, it is necessary in every case to take politically well grounded and legally exact control measures.

We must be still more consistent in our efforts actually to eliminate violations of the law, to take more effective preventive measures and to expose and overcome ideological errors. It is very important in this regard to enforce vis-a-vis the delinquents the legally prescribed measures concerning accountability without respect of persons and to intensify the public discussion on illegalities. The main effort must be focused on producing results at the scene of action, in the work and management collectives so that everyone concerned can adopt an unequivocal position on violations of the law. It is imperative that the organs of economic management draw concrete and inescapable conclusions from the transgressions exposed, not least in regard to those who permitted them. The state prosecutor must not encourage any tendencies to evade legal consequences. Above all, this goes for the appropriate differentiation of the requisite measures concerning individual penal accountability. It is not convincing, for example, if the state prosecutor by means of protest sharply criticizes a plant director, because the director tolerated irregularities in the innovator work, but if in regard to subordinate--undoubtedly guilty--employees he only calls for disciplinary measures. It is not in accordance with the principles of socialist legality and it negatively



affects education, if there is--even remotely--the impression that only "the little people" are held accountable.

#### Quality--A Key Factor Concerning Effectiveness

On the other hand, it is impermissible in the absence of evidence to accuse managers and management organs of a violation of the law, if such a transgression is merely suspected. In this regard, one must bear in mind that not everywhere where offenses have been committed contributing offenses have been committed by the management. The accusation of transgression of the law must be supported by sound evidence. Moreover, it should be noted that whenever a functioning intraplant control system has helped to expose criminal offenses, it is not good policy to "play up" anew irregularities that within the framework of the management responsibility of the appropriate organs have already been eliminated. Rather, such cases call for praise, precisely because the exposure of criminal conduct was accomplished on the enterprise's own resources. In such cases, the state prosecutor should resort to suggestions and recommendations in accordance with Article 19 of the Criminal Code, in order to encourage further concrete preventive measures.

Superior organs and institutions must be urged fully and effectively to discharge their responsibility concerning control over adherence to the law in their jurisdiction so that--as the 10th Party Congress emphasized--observance of the law is effected as the unconditional and primary task of all state organs, combines, enterprises and cooperatives, of their leaders and collectives and of all working people. The report of the Politburo to the third session of the SED Central Committee again emphasized the inseparable link between the uniform enforcement of the party resolutions and the all-round consolidation of legality and it demanded: "The councils of the bezirks, kreises, cities and municipalities should therefore intensify the control over its observance and they should try to insure that the responsibility at all levels of state management is fully discharged. In this we include exemplary order, a high degree of discipline and security and strict observance of socialist legality."<sup>8</sup> Intensification of the efforts toward this goal will further improve the effectiveness of the state prosecutors' control over adherence to the law.

Under all circumstances, it is necessary to insure that every sign of transgression, especially pertinent pointers and tips by citizens, are conscientiously followed up. Regarding the further consolidation of the citizens' trustful relationship to their socialist state, it is of great importance that in the future, too, no restrictions of their rights and interests will be permitted. The citizens of our country take a strong interest in the safeguarding of a dependable legal order, of a healthy moral climate and of stable production operations in the enterprises, work collectives, cities and villages.

Now as ever, special attention must be directed toward strict implementation of the Labor Code, which is of great significance in regard to the social well-being, social progress, educational opportunities, and cultural interests of the workers. The legally prescribed role of the state prosecutor focuses on controlling the enforcement of the unity of rights and responsibilities as defined by the labor law provisions. To a large extent, this contributes to the unity of democracy and discipline, which under socialist conditions is indispensable.



An important precondition for our work is the further extension of the proven cooperation with leading organs and base organizations of the party of the working class with the object of deepening--in a complex, prudent and farsighted manner--the political-ideological education work in combination with appropriate control measures.

Another increasingly important project is the transmission of information on results and experience obtained in the state prosecutors' control activities to the local representative bodies and their organs.

Increasingly, the effectiveness of our work depends on how we utilize and further the capacities of the social courts. The development of the social courts--as outlined in the SED Program--is an integral part of the main course toward the further development of the socialist state power. In accordance with the policy of further development of socialist democracy, which policy was affirmed by the 10th Party Congress, the state prosecutors must be fully committed to discharging their legal responsibility for supporting the social courts. The support of the social courts, which is necessitated by the close cooperation with the organs entrusted with their direction, must be reflected above all in the concern with the legality and social effectiveness of their decisions and recommendations.

#### FOOTNOTES

1. See E. Honecker, "Report of the SED Central Committee to the 10th SED Congress," Berlin, 1981, p 119.
2. See W. Stoph, "Directive of the 10th SED Congress on the Five-Year Plan for the Development of the GDR Economy During the Period from 1981 to 1985," Berlin, 1981, p 42.
3. See H. Harmland, "Consistently Implement the State Prosecutor's General Control over Adherence to the Law," NEUE JUSTIZ, No 2, pp 54 ff.
4. See H. Reizmann, "State Prosecutors Support the Struggle Against Production Disruptions and Breakdowns," NEUE JUSTIZ, No 8, 1981, pp 368 ff.; K. Brod-fuehrer, "Follow-Up Control by the State Prosecutor for the Purpose of Insuring Protection of Social Property," NEUE JUSTIZ, No 9, 1981, pp 417 ff.
5. See W. Stoph, op. cit.
6. See H. Harmland, "Further Consolidate Law and Legality," ARBEIT UND ARBEITSRECHT, No 7, 1981, pp 7 ff.
7. See J. Streit, "Tenth Party Congress--Compass for the State Prosecutor's Activities in the 1980's," NEUE JUSTIZ, No 6, 1981, pp 243 ff.
8. See E. Honecker, "Report of the Politburo to the Third Session of the SED Central Committee," Berlin, 1981, pp 51 ff.

## Widespread Thefts at Combine

East Berlin NEUE JUSTIZ in German Vol 35 No 9, Sep 81 pp 417-418

[Article by Klaus Brodfuehrer, state prosecutor in the office of the Gera Bezirk state prosecutor: "Follow-Up Controls by State Prosecutor to Assure Protection of State Property"]

[Text] One of the main objectives of the General Control over Adherence to the Law is to insure that unlawful situations are effectively eliminated and that improvements are made in regard to prevention of violations of the law. It is imperative that especially in those places where violations of the law have made possible or facilitated serious crimes against property follow-up controls be carried out in regard to the results of the state prosecutor's control measures.<sup>1</sup> In the following, we will report on such a follow-up control by the Gera Bezirk State Prosecutor.

### Measures of the Kreis State Prosecutor

In an enterprise of the meat combine, several employees have committed large-scale theft of meat and sausage products. A contributing factor in this theft was the fact that the plant management personnel had insufficiently discharged their responsibility for the upholding of order, discipline and security, that the intra-plant control system was insufficiently organized and that in some production sectors consumption of alcohol was tolerated.

The kreis state prosecutor filed a protest against the transgressions exposed. The control measure was evaluated in the presence of the state prosecutor and with the participation of representatives of the combine management, of the trade union and of social bodies (e.g. honorary control organs). In his comment on the protest, the plant director informed the state prosecutor of the measures instituted by him, which are to insure conscientious control in the supply depot, orderly work on the part of the plant guard members, active participation of the honorary control organs and solution of a number of technical-organizational problems concerning the safeguarding of socialist property (relocation of the parking area for the plant employees' automobiles, opening of a new entrance to the plant).

### Results of the Follow-Up Control by the Bezirk State Prosecutor

During the follow-up control, it was established that the measures promised in the comment on the kreis state prosecutor's protest were in fact taken. However, a few technical-organization stipulations, the execution of which requires the services of other enterprises in the region, had not yet been implemented.

First of all, it should be noted that in terms of management the protection of the socialist property has been improved. By means of a strict control and report system, the plant director insures conscientious discharge of the legal responsibilities in this field. Legality, order and security are considered an important political-moral question in regard to the solution of the economic problems of the enterprise. Many workers and members of the management staff are carrying out exemplary education work along these lines. This is reflected in the work of the plant's honorary control groups in regard to the upholding of order, discipline and security, in the work of the conflict commissions and of other social organs, and

in the struggle of the supply depot work collective for reduction of losses and damage claims. The educational work, which is carried out by the trade union groups and work collectives, has increasingly drawn on the appropriate department heads. All events are evaluated in these collectives.

In particular, the following points were noted:

- The intraplant control system insures far-reaching protection of socialist property.
- In the supply depot, a strict organizational system has been established. Through measures such as constant changes in the itineraries, which are announced to the drivers only at the time of their departure, establishment of a strict sequence of commodity issue operations, intensified controls of the loaded vehicles by the foremen and supervisors in charge, and the daily ceiling of the warehouse, the goods are protected from being taken by unauthorized personnel. Whereas formerly there were up to 50 complaints a day by the sales outlets, presently there are only 4 or fewer or none at all.
- In the enterprise, 10 collectives are competing for recognition as units of exemplary order, discipline and security and they are actively supporting the project to be effected through the state prosecutor's control measure.
- On a daily basis, the plant guard members--supported by the honorary control group--conduct searches of persons and private motor vehicles; these searches are recorded in a control log. Upon discovery of transgressions, the requisite measures are taken.
- In the plant, a new entry zone has been established, which insures reliable control of the foot and vehicle traffic. The obstacles delaying the opening of this entry zone (preparatory work by other enterprises of the region) were brought to the attention of the chief burgomaster during the follow-up control. The burgomaster took the requisite steps to insure immediate use of the entry zone.
- To insure strict observance of the prohibition of alcohol consumption, appropriate control measures have been established (monthly instructions, locker checks, sobriety tests).
- In the event of violations of the law and breaches of discipline, the enterprise consistently enforces disciplinary or material accountability. Increasingly, these procedures are evaluated in the work collectives.
- The enterprise has consistently discharged its obligations in connection with compensation of the damage inflicted on socialist property on account of the offenses mentioned. At the time of the follow-up control, approximately 50 percent of the compensation claims had been met.

#### Methodical Procedure

The follow-up control was carried out on the basis of a conception which--proceeding from the objectives, the facts of the case and the legal regulations violated--focused on concrete investigative questions.<sup>2</sup> In addition, the follow-up control

covered problems concerning the organization of operations and information of other organs.

Two weeks before the target date, the state prosecutor informed the plant director, the secretary of the SED base organization and the chairman of the plant trade union administration of the scheduled follow-up control. Through this information, the state prosecutor secured the cooperation of the other enterprise organs that had participated in the evaluation of the original control measure.

At the beginning of the follow-up control, this group of individuals was invited to a discussion, during which the state prosecutor explained the nature and the objective of the follow-up control, while the plant director delivered an informative report. This discussion was followed by a plant inspection.

Essentially, the follow-up control consisted of talks with management cadres and workers and examination of plant documents and records. During the concluding evaluation of the follow-up control, which was conducted in the presence of all participants, the state prosecutor expressed the conviction that the projects developed by the enterprise for enforcing socialist legality had produced the changes intended by the protest. At the same time, he suggested ways of meeting even more fully certain requirements.

#### FOOTNOTES

1. See H. Harrland, "Consistently Implement the State Prosecutor's General Control over Adherence to the Law," NEUE JUSTIZ, No 2, 1981, p 54.
2. Regarding the conceptional preparation of follow-up controls, see H. Reizmann in NEUE JUSTIZ, No 8, 1981, pp 368 ff.

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NEW CRITERIA SOUGHT FOR MEASURING ECONOMIC PERFORMANCE, GROWTH

East Berlin WIRTSCHAFTSWISSENSCHAFT in German Vol 30 No 3, Mar 82 (signed to press 15 Jan 82) pp 321-335

[Article by Prof Dr Helmut Koziol, economist; born 1927; director, Central Institute for Socialist Economic Management, SED Central Committee; chairman, Scientific Council for Economic Research, GDR Academy of Sciences; member, SED Central Committee, GDR Academy of Sciences and of Research Council: "Economic Growth and Development of the Material-Technical Base." A translation of the East Berlin EINHEIT article by the SED Central Committee secretary for economic affairs, cited in footnote 2, is published under the heading, "Mittag Urges Combines to Economize, Raise Production," in JPRS 78885, 1 Sep 81, No 2167 of this series, pp 64-76]

[Text] The author discusses three sets of problems. Firstly, he substantiates the necessity to obtain clarity on the criteria for the economic performance increase that is to be achieved by means of development of the material-technical basis. This performance increase is contingent upon energy and material economy, i.e. reduction of production input, upon increased labor productivity and upon increases in the producer goods quota.

Secondly, the author emphasizes the course of intensively expanded reproduction as the basic trend of the economic strategy to be pursued in the 1980's so as to be able year after year to increase the output volume without any additional manpower and with practically the same volume of energy and raw material reserves. The consistent continuation of the policy of the principal task--a policy characterized by the unity of economic and social policy--is the precondition for all social progress, which progress is based on the qualitative improvement of the material-technical basis.

Thirdly, the author discusses current problems concerning economic theory in connection with the development of the material-technical basis; in this respect, he places emphasis on problems concerning the characteristics and indexes of economic growth, on the inter-relationship of input and output, on assortment renewal, on the mobility of production resources, on qualitative balancing, on the overall efficiency of human and material labor and on labor- and resource-saving trends of scientific-technical progress.



It is of crucial importance to obtain clarity on the criteria for performance increases in the GDR economy. The development of the material-technical basis and its utilization must proceed in such a way that the ambitious targets established can be attained. The fundamental task in the further organization of the developed socialist society in the GDR consists in the consistent implementation of the ten points of the economic strategy that is the standard of all action. They reflect those factors on which depends the further steady and dynamic growth of the GDR economy; they characterize the requirements concerning further intensification in all fields of social production and reproduction.

Proceeding from the resolutions adopted at the 10th SED Congress, the GDR People's Chamber has now discussed and adopted the draft of the 1981/85 Five-Year Plan. Emphasis is placed on continuance in the 1980's of the policy of the principal task--a policy characterized by the unity of economic and social policy. On the basis of a high production development rate, increased efficiency, scientific-technological advances and improvement of labor productivity, the material and cultural living standard of the people will be raised further. Consequently, the five-year plan is oriented primarily toward economic strategy. The competition initiatives of the trade-union-initiated competition under the motto "Great Performance Increases Through Increased Labor Productivity, Efficiency and Quality--Everything for the Well-Being of the People and for Peace" aim to implement this strategy.

The criterion for the effectiveness of all measures pertaining to economic policy, for the development of the material-technical basis of the national economy and, last but not least, for the orientation of the work concerning economic theory is the continuing steady implementation of the principal task. The conditions underlying the fulfillment of the principal task are subject to great dynamic change. Since the 10th SED Congress and the preparatory period leading up to it, there have taken place significant changes in regard to the national economy and foreign policy.

These facts and the dynamics of the scientific-technical developmental conditions must be taken into consideration and this goes also for GDR economics.

All of the problems concerning economic strategy, all the 10 points of the economic strategy are inseparably linked with the developmental trends of the material-technical basis. It is inconceivable that one could make another step in regard to the combination of the advantages of socialism with the scientific-technical revolution, without being clear about the developmental trends of the material-technical basis. To illustrate this by an example: The concentration of the national economic potential on focal points of development--ranging from the large-scale introduction of microelectronics to the economical conversion of energy--calls for detailed studies on the interconnection and interaction between the expansion of the material-technical basis in the raw material and energy sectors and the considerably increased economy in the production and utilization of energy and raw materials, which is bound up with marked savings of resources.

Evidence of the increasing concentration are the 66 integrated state orders in the field of science and technology and the 157 orders stipulating top-level performance, e.g. in regard to product quality improvement, highly productive technological processes and efficient utilization of import possibilities in accordance with the plan.

During the period from 1981 to 1985, labor productivity will be increased to approximately 129 percent, i.e. a working time savings of approximately 3 billion hours. This means that in comparison with the period from 1976 to 1980 the performance must be doubled. The objective is to safeguard this increase in labor productivity through the future development of the material-technical basis. By reducing the consumption of raw and secondary materials--and this is inseparably linked to the further development of the material-technical basis--the GDR hopes it will for the first time be able to effect a steady reduction of production input in the next few years.

The production increase by an annual average of 5.8 percent must be achieved by means of an increase in raw material input averaging no more than 0.2 percent a year. The production performance thus to be attained is feasible only by means of an appropriate streamlining of the material-technical basis. Work efficiency, socialist rationalization, the new criteria concerning investment policy and development of top-quality consumer goods, and the dynamics of the performance development and of the national income are inseparably linked with the organization of the material-technical basis under extremely complex conditions.

The GDR scientists have developed diverse ideas in this regard. Here one should draw attention to a book published by the Academy for the Social Sciences at the SED Central Committee and entitled "On the Material-Technical Basis in the GDR" and to studies on demand complexes, which were begun at the Central Institute for Economics at the GDR Academy of Sciences and which have now been extended. The latter have provided important stimuli in regard to the development of the material-technical basis. It will be necessary to examine all vertical processes as well as the structure of the material-technical basis from the point of view of satisfaction of the demand complexes. These studies are very significant, as are the studies concerning development of the natural resources. However, there are economists who consider the natural resources to be separate from the work process. The available valuable studies, including those on intensification problems, are part of the foundation of further research work. Thus we do not begin at the ground level.

At the third session of the SED Central Committee, Erich Honecker once again emphasized that economic growth now is directly dependent on further progress in regard to intensification--"and that goes for all fields of social production. The reserves of energy and of raw and secondary materials can no more be increased than the strength of the labor force. Likewise, the investment potential available to us is severely limited. Thus further production increases must be achieved through improvement of the input-output ratio by means of consistent intensification. There is no other way."

Consolidation of the material-technical basis, economic growth and improvement of labor productivity are tasks of crucial importance for the organization of the developed socialist society, for the further systematic implementation of our policy which is oriented toward the well-being of the people and toward peace. Only through the further development of the material-technical basis can we insure the steady increase in labor productivity that is the foundation of economic progress. It is precisely this that constitutes the growing maturity of the socialist society in all of its aspects.

In regard to the SED's economic strategy for the 1980's, the focal point is the fact "that between the main trends of the development of the productive forces there is an inseparable internal interconnection" and "that in this process the economic preconditions for the rapid development of the modern productive forces are created by increasing the effectiveness and improvement of labor productivity itself."<sup>2</sup>

As was pointed out by Marx, the capability of society to spend a minimum amount of time for the satisfaction of certain needs makes it possible--under the conditions of socialist ownership and of the political power of the working class--to gain "more time...for a different type of production, be it material or intellectual."<sup>3</sup> In our society, this capability grows along with the advances in the intensification of social production. In the SED Program, this intensification is called the main course of economic development in the GDR, since it insures that increase in economic performance "which is indispensable for raising the living standard of the people, for the continuous modernization and expansion of the material-technical basis of socialism in the German Democratic Republic and for the establishment of the basic preconditions for the gradual transition to communism."<sup>4</sup>

This programmatic statement likewise rests on Marx' findings; for it was Marx who elaborated the difference between extensive and intensive reproduction and their peculiarities. Here one should draw attention to his statement "that in terms of its real nature, the accumulation, the conversion of surplus value into capital is a reproduction process on an extended scale, regardless of whether this extension is extensive in the form of addition of new plants to the old ones or intensive in the form of extension of the plant's existing scale."<sup>5</sup>

At the 10th SED Congress, Erich Honecker emphasized that the economic strategy for the 1980's is based on intensively expanded reproduction and that socialist intensification is becoming more and more a distinguishing characteristic of our planned economy.<sup>6</sup> Consistent intensification as the foundation of economic development is not a matter of discretion. It is the only possibility of increasing production year after year without any additional manpower and with practically the same volume of reserves of raw materials and energy. It is both the internal and the external conditions underlying the social development of socialism that make it necessary to advance still more systematically in regard to the further intensification of production and to include all sectors in this endeavor. The resolutions adopted by the 26th CPSU Congress and by the 10th SED Congress show that in this respect--as in the overall policy of the two fraternal parties--there is complete agreement.

The further development of the material-technical basis is the essential foundation for the further organization of the developed socialist society primarily because it is absolutely necessary for the further improvement of labor productivity, for the growing maturity of the socialist society in all of its sectors, but also because it is based on economic progress. It is very significant that in the GDR--as in the other socialist countries--the problems concerning the material-technical basis, i.e. the development of the productive forces, have fully been integrated in the political economy of socialism in the last few years. It has been possible fully to incorporate all technological processes. This is an extraordinarily significant theoretical accomplishment of all political economists who--aware of the requirements of the present--have been looking into the interaction between productive forces and production relations. In doing so, they have also answered

questions extending to philosophical and ideological problems, e.g. the interaction between productive forces and production relations and the role of the productive forces in the organization of the developed socialist society.

At this point, we would like to draw attention to the statements made by Lenin in regard to the interconnection between productivity and social organization and in regard to the socialist mode of production as a whole. Emphasizing the significance of the improvement of labor productivity for the organization of socialism, Lenin stated that after the working class has gained power and consolidated its position, the primary objective is "to create a form of society that is superior to capitalism, namely: improvement of labor productivity and--bound up with it (and to this end)--a higher level of work organization."<sup>7</sup> Improvement of labor productivity is the concentrated reflection of the socialist society's vital interests, the pursuit of which results in the steady consolidation of the economic, social and political foundations of the socialist order, in the continuous progressive transformation and further development of the socialist mode of production and way of life. It is precisely this that is our guideline in the implementation of the economic strategy.

The increasingly important role of the material-technical basis and the concrete requirements concerning its full utilization and further consolidation result from the fact that the consistent continuation of the policy of the principal task based on the unity of economic and social policy is the fulcrum and focal point of all further social progress. The development of the economic strategy for the further implementation of socially significant tasks necessitates resolute improvement of the effectiveness of social work, a high and steady rate of growth of the national income and reduction of the production input. These steps rest on the appropriate material foundation: The qualitative improvement of the material-technical basis through further significant steps toward the organic combination of the advantages of socialism with the accomplishments of the scientific-technical revolution.

In his "Outlines of the Critique of the Political Economy," Marx had already drawn attention to the close interconnection between the development of science and the utilization of nature by man--ranging from the further development of the conversion processes to the processes of advanced refinement--as we put it today. Marx stated that closely connected with this is "the discovery, creation and satisfaction of new demands arising in society itself; the cultivation of all characteristics of social man and the production of man as a being characterized by as many demands as possible."<sup>8</sup> And Lenin stated that the victory of socialism will be possible only if the development of the economy "is based on the results of science and thus on the development of a tremendous reservoir of scientifically trained specialists."<sup>9</sup> In accordance with such findings, it is necessary significantly to increase the economic effect of science and technology.

Practical experience has confirmed the fundamental scientific-technical finding that advances in the further organization of the developed socialist society are ultimately based on the systematic further development of the productive forces. It is of great importance constantly to take into consideration the unity and interaction of the expansion of the material-technical basis and the comprehensive socialist intensification of the economic reproduction processes. In the literature, one gains the impression that intensification frequently is considered merely a process of current production. However, the crucial problem is the fact that



intensification occurs at the beginning of the reproduction process and naturally then permeates it, comprising the entire reproduction. The present standards and conditions of economic growth make it necessary to implement the intensification of social production, the acceleration of scientific-technical progress and the consolidation of the material-technical basis as a uniform process. This means that the basic tasks in the further expansion of the material-technical basis are increasingly determined by the necessity to pass over to a higher level of intensification, a level oriented toward its comprehensive implementation.

The comprehensive implementation of intensification in the further development of the material-technical basis necessitates farther-reaching and broadening work. Of great interest are answers to the problems posed at the 10th SED Congress, e.g. the safeguarding of the energy and raw material basis and satisfactory control of the coal and energy situation; these problems necessitate a change of position in regard to expansion and economy. To safeguard the energy and raw material basis and at the same time effect a more efficient use of the energy sources and significantly improve material economy, primarily through refinement (in this regard, the political economists must also theoretically analyze the effect of refinement on the process of value formation, i.e. they must clearly elaborate the results of the refinement process)--these are the problems that the economists are presently confronted with and that they must solve by themselves.

Scientific-technical progress and improvement of labor productivity must be considered closely related to the focal point of the present five-year plan--a high degree of refinement, comprehensive utilization of the available energy sources, raw materials and secondary materials at all production stages. To insure the requisite performance increase and the availability of more and better end products for the population, for the national economy and for exports with approximately the same volume of raw materials and energy, is a task that makes heavy demands on the intellectual-creative potential, on the industriousness of all. At the third session of the SED Central Committee, it was determined that the input of economically important energy sources, raw materials and secondary materials--as compared with a unit of industrial commodity production--must be reduced by an annual average of 6.1 percent; energy intensity is to be reduced by at least 5 percent, rolled steel in the metalworking industry, by 6.8 percent, and cement in the construction sector, by 5 percent. In all combines and enterprises, the objective is to convert--by means of large-scale employment of skilled labor--every single kilogram of raw material into high-grade products.

Erich Honecker pointed out that all sectors--from raw material extraction to the final production stage--must participate in the large-scale economic programs for high-level refinement and that in this process the GDR economy will assume new characteristics, characteristics increasingly appropriate to a highly efficient industrialized country of the 1980's.<sup>10</sup> It is the function of skilled labor in socialism to produce--in combination with the improvement of the economic structure in accordance with the demands to be met--from raw materials, secondary materials and energy as many high-grade products as is possible on the basis of utilization of the findings of natural science and technology at their "highest point" and on the basis of the best possible organization of the reproduction process. The focal point in this respect is the utilization of skilled labor, i.e. its capability efficiently to convert material and energy. Of immediate interest in this regard is Marx' finding that the expenditures on raw materials and machinery need not



necessarily increase to yield a surplus value. This occurs, when the product "is given a higher finish, a higher use value, i.e. when the use value of the product increases."<sup>11</sup>

In connection with the task to enforce high-level refinement--in combination with modern processes and technologies--at all production stages, effectively to use microelectronics, robot technology and electronic data processing in all sectors of the national economy, emphasis is placed on the necessity more efficiently to organize the combination of the stages and the safeguarding of the requisite complexity in and among the branches and combines. Again, the interrelationships formulated by our classics for their time have retained their validity in this respect. One might mention here Lenin's statements on the GOELRO Plan or Marx' observation that in a given production sector the development of the productive force of labor, "which in part may be dependent on advances in the field of intellectual production, above all in natural science and its fields of application, appears to cause the reduction...of the costs of the means of production in other industrial branches."<sup>12</sup> In the first volume, Marx had already stated: "The transformation of the mode of production in one industrial sector causes its transformation in another sector," because they "are canceled out as phases of an overall process."<sup>13</sup>

The effect of this development of the material-technical basis by means of refinement is an important question that must be answered by the economists. Scientific-technical progress, improvement of labor productivity and a high quality level of production in all economic sectors--from the preliminary stages to the production of the end product--form an integral whole.

By 1985, the output of high-grade products bearing the "Q" quality seal is to amount to approximately M 100 billion. This entails high demands on the improvement of the volume-quality ratio through research and development work and it necessitates great progress in high-level refinement on the whole--in terms of appropriate use value parameters, costs, service life, reliability, design, etc.

The classics of Marxism-Leninism have always emphasized the unity of value and use value. Thus Marx stated in regard to the interrelation of quantity and quality in the improvement of labor productivity: "The increase of the productive force is also related to quality; as for quantity, it is related to a given product of a certain degree of quality."<sup>14</sup>

In regard to product quality in a "future society," Engels stated that the "net efficiency of the various utility articles, balanced among each other and vis-a-vis the quantities of labor necessary for their production, will ultimately determine the plan."<sup>15</sup>

As regards the sectors of the infrastructure, it should be emphasized that improvement of the efficiency of the GDR economy necessitates efficient utilization and organization of the infrastructure--in terms of both branches and regions and in regard to both the infrastructure of production and the sectors outside of production and also the sectors subject to common effects. If the infrastructure is not organized in accordance with the requirements or if it is insufficiently modernized, this will subsequently result in losses, losses that the production sector initially labeled positive results.

In the GDR, the resources available for the consolidation of the material-technical basis are considerably taxed by the extraordinarily high preliminary requirements, both in regard to the development of the energy and raw material sectors and in regard to the large-scale introduction of revolutionary scientific-technical developments. This intensifies the necessity to effect economic growth primarily by means of socialist intensification, i.e. on the basis of the existing economic cycle and above all on the basis of qualitative improvement of the material-technical basis. The capability fully to utilize all available resources, to improve them through modernization and reconstruction and to utilize them with increasing efficiency is of crucial importance. The development of the production of equipment, machinery, auxiliary materials and spare parts for exports and the radical improvement of the technical and technological level of the entire production process must be thoroughly examined. This fully applies also to problems concerning simple reproduction as the source of extended reproduction in connection with new investments. The problem is that simple reproduction as the source of extended reproduction must be consistently oriented toward modernization. It calls for modernization measures and it necessitates orientation of the production process toward fulfillment of the requirements of intensively expanded reproduction so as to produce an appropriate effect. In their effect, the investments must be considered a uniform process. Here one must not consider merely the "depreciation" and "new investment" funds; rather, in terms of the effect on the reproduction process, the investments must also be regarded as a uniform process of modernization and restoration. The improvement of producer goods economy is largely contingent upon the way in which--under conditions of (in value terms) simple reproduction--sources of production expansion are tapped through increases in the use value and performance parameters of the equipment. Marx generally attaches great importance to the utilization of the available capacities and--in this context--to simple reproduction. Close attention should be directed to his statement concerning the capitalist reproduction process: "The development of the productive force of labor also reacts to...the capital already engaged in the production process." As the labor productivity increases and as scientific-technical advances are made, discarded means of production "are replaced by more efficient and--in terms of performance range--less expensive machines, tools, apparatus, etc. The old capital is reproduced in a more productive form, aside from the continuous changes of details in the available means of production.... Thus every introduction of improved methods etc. has an almost simultaneous effect on the supplementary capital and on the capital already engaged in the production process."<sup>16</sup>

Marx--and Engels as well--made many such statements--statements directly describing the interrelationship between modernization and restoration, and with due regard for the times in question, these statements are theoretically interesting. Here one should emphasize the improvement of producer goods efficiency in connection with the improvement of investment effectiveness. As is well known, the main emphasis of the investment policy is on intensification of the investments for rationalization purposes so as to significantly improve the effectiveness of the reproduction process as a whole. In this regard, the systematic combination of science and technology with the investment activity is of crucial importance. The capacities resulting from the utilization of the results of science and technology are to a large extent utilized through modernization and restoration for the socialist rationalization of the existing material-technical basis, rather than primarily for its renewal. We must theoretically analyze this process in greater detail. The groundwork was laid in the aforementioned book by the Academy for the

Social Sciences at the SED Central Committee. At the 10th SED Congress, Erich Honecker pointed out that in keeping with the labor-, energy- and material-saving effect of science and technology, which also serves to increase producer goods efficiency and which deeply influences the rate and systematic development of the intensively expanded reproduction, the further improvement of the material-technical basis will be largely determined by new, basic technologies, microelectronics, etc.

The development of the material-technical basis by means of intensification is reflected in the fact that regarding the reserves of labor, energy, raw materials and--to some extent--producer goods that are necessary for safeguarding the new production, the requisite capacities are available. This is a crucial precondition for economic growth distinguished by increasing efficiency. The effect of intensification on the material-technical basis is reflected in the fact that savings of human labor are less and less realized through increased use of producer goods; rather, the improvement of labor productivity will have to be combined with a reduction of the energy, material and producer goods input in the production of the national income. The intensification of resource management is bound up with an investment distribution that facilitates expansion of the energy and raw material basis by means of economy measures. Even though economic growth must for the most part be effected through energy and raw material savings, it goes without saying that the further expansion of the energy, raw material and secondary material basis is an integral part of the development of the material-technical basis. The refinement level of the energy, raw material and secondary material basis becomes an important criterion in regard to the maturity of science and technology and their productive utilization.

All the requirements implicit in the economic strategy are not an end in themselves. They all serve to implement the policy of the principal task. In this regard, one of the objectives is significantly to increase the output of consumer goods for the population and to do this on the basis of domestic raw materials and by means of increased utilization of scientific-technological findings, with due regard for attaining a high level of design. Attention should be directed to making use of the possibilities offered by the producer goods industry. Thus, in regard to the five-year plan, the objective is markedly to increase the consumer goods output, including the requisite auxiliary materials and preliminary stages, and significantly to improve product quality. In the sectors under the jurisdiction of the Ministry for Light Industry, for example, the output of products bearing the "Q" quality seal is to be increased to 156 percent, while in the sectors under the jurisdiction of the Ministry for the Glass and Ceramics Industry, this type of output is to be raised to 261 percent. The producer goods-producing industry has the task consistently to increase its contribution to the production of consumer goods, primarily through the development and production of high-grade consumer goods and through systematic expansion of the output of rationalization equipment and building elements for the production of consumer goods.

According to Marx, the increasing satisfaction of the needs of society under the conditions of the socialist planned economy is inseparably linked to time economy, i.e. the lowest possible input of social work through increases in productivity for the systematic satisfaction of demand. The production of high-grade consumer goods in all sectors of the national economy on the basis of the refinement of domestic raw materials must likewise be inseparably linked to new ideas concerning the development of the material-technical basis. In regard to high-grade consumer

goods, it is necessary to clarify even more unequivocally that it is not sufficient to reduce production input only in the production of consumer goods; one should bear in mind that in comparison with the international level the consumption of energy and materials in the use of a number of technical consumer goods is so high that very soon the production input savings are offset again by high energy consumption for equipment such as television sets, refrigerators and washing machines. In terms of their effect, it is necessary fully to include in the entire cycle the consumer goods--at any rate the durable goods, whether apartments, refrigerators or washing machines. This goes not only for the aspect of satisfaction of demand, but also for the aspect of minimization of input in regard to the functioning of the consumer goods in the reproduction process. Thus it is necessary somewhat to correct and more precisely to define the established position in regard to consumer goods in the political economy of socialism. One must take into consideration not only the use, but the entire effect. The preliminary work results at hand should be further developed.

Finally, it should be noted that the development and improvement of the material-technical basis by means of intensification, the material-technical furnishing of the nonmaterial sectors and their efficient utilization are of the greatest importance in regard to the constancy and effectiveness of the economic and social development of the advanced socialist society. We still do not have enough well-grounded studies on the development of the material-technical basis, on the improvement of its effectiveness in the nonmaterial realm, even though this realm is of necessity getting larger and larger. (The social effect of the further consolidation of the material-technical basis through intensification is reflected in the following aspects, with the principal aspect found in the development of the demand complexes. The work to be done in the field of demand complexes--not in regard to the norms, but in regard to the way and the various stages, from the equipment to the end product for the satisfaction of the demand--touches on a crucial problem; naturally, it is of great importance in regard to the social development.) Here one should single out the following aspects:

- Further development of the socialist character of work, primarily through increasingly intellectual-creative requirements in the work process and efficient utilization of the available educational potential, through reduction and elimination of unhealthy, physically demanding and monotonous work in all sectors of the national economy;
- creation of working conditions that promote the development of socialist personalities and that help to make the need for work the most important need of life;
- further diminution of existing social differences between intellectual and physical work, between city and country, etc.

The further consolidation of the material-technical basis is not only the precondition for the requisite social development; it is also the result of the social effectiveness in all classes and strata. As Erich Honecker explained at the 10th SED congress, it is a great challenge to the creativity of the scientists, designers, technologists and process engineers and to the abilities of the highly skilled workers.



Of great importance for the systematic organization of the material-technical basis of the national economy during the further development of the advanced socialist society is the augmentation of the capacities of the combines in accordance with the requirements of society as a whole. The key factor in this endeavor is the further development of the combines' material structure, i.e. their scientific-technical capacities, their production mix, the development of the equipment and technologies, the systematic specialization, cooperation and combination. Considering the characteristics we have emphasized, the most difficult problem concerning the further development of the combines is their further internal organization in terms of the socialization process. What is the best way of developing the material-technical basis of a combine so as to attain the relatively closed reproduction process, and what is meant by the term relatively closed reproduction process? In regard to the further development of the combines, general studies are not sufficient; we need empirical research. Similarly, in regard to the various requirements concerning the development of the material-technical basis of the combines, detailed studies are required.

On principle, the development of the material-technical basis in the combines can be achieved only via intensive reproduction. This means above all that the investments must not preserve the given level of the productive forces. Marx always combined the qualitative improvement of production within the framework of advanced industry with scientific-technical progress. The material-technical basis in the combines must be capable of accommodating scientific-technical innovation processes. Frequently, one observes that innovation processes are not sufficiently systematized. This goes also for the cycle science-technology-production and for the rate of dissemination of innovations.

Every combine is confronted with the task to find the economically most favorable variant of improvement of the material-technical basis through intensification. Above all, this means that they must effect--by means of the available basic assets and their modernization--progressive technological solutions. Finally, the requirement to orient investments only toward production intensification applies not only to rationalization investments, but also to investments required for reasons of capacity. These investments, too, must be based on the highest level of science and technology; in regard to preparation and implementation, they must fully meet the criteria of intensification. As has been shown by studies in various regions, there are considerable reserves in this area, above all in regard to the moment of implementation.

The position of man as the subject of production and as the principal productive force, i.e. man as the creator and user of the material-technical basis, must be sufficiently clarified. Improvement of the net benefit of man's living labor necessitates efficient utilization of the material-technical basis. We must pay greater attention--theory-oriented attention--to the social processes in connection with scientific-technical progress. In connection with the changes in the material-technical basis, it is necessary thoroughly to examine--object by object and in every region--the social processes, the changes in the social processes. Such studies reveal a great many problems that we must confront also by way of theoretical analysis. Key aspects in regard to improvement of the efficiency of living labor through consolidation of the material-technical basis are the systematic development and distribution of the social work capacities in combination with the changes in the production and work organization with the object of eliminating jobs



and preparing the workers discharged for new activities. Thus it is worthwhile thoroughly to examine an enterprise such as Schwedt in terms of the development of the material-technical basis rather than merely in terms of labor economy. There is a close interconnection between the acceleration of production intensification through increased efficiency of the working potential, above all through the best possible utilization of the workers' intellectual potential, the systematic combination of the scientific work organization with the rationalization requirements, the increasing combination of the scientific work organization as an integral part of scientific-technical progress with the modern technologies, and the further development of the consciousness of socialist ownership, of the concomitant creativity and initiative of the working people.

According to Erich Honecker, it is one of the elementary tasks of socialist management always "to cultivate close, trustful relations with the work collectives, constantly to inform them on their tasks and in due time to discuss with them new solutions."<sup>17</sup> This comprises all of the problems concerning work atmosphere, social conditions, order and safety. This is one of the basic conditions underlying the workers' mass movement in the GDR economy in the struggle for effective performance increases and for utilization of the available possibilities of attaining in most of the combines the level of the advanced workers.

In connection with the problem fully to orient management and planning toward the requirements of intensively expanded reproduction and toward a corresponding development of the material-technical basis, the GDR economists are confronted with new tasks. As is shown by the discussions and the preliminary work results, our basic approach fully conforms with that of the Soviet economists.

It is imperative that the GDR economists participate more actively in the discussion on the characteristics and indexes of economic growth. The shift of emphasis from the extension of the production criteria to the qualitative change of production raises the requirements concerning the methodology of planning and accounting. Now as before, the concepts and indexes of economic growth that presently are being used in economic theory and in economic planning reflect primarily the development of the production standards. As yet, they are not sufficient for measuring structures, assortment or quality.<sup>18</sup>

--The present input conception of the measurement of production results should be supported, because presently it is the conception most suited to the analysis of large-scale economic processes; it is necessary more fully to adapt it to the measurement of social benefits, with the production results measured in accordance with the degree of demand satisfaction. The objective is to evaluate the production and its development in connection with the development of the material-technical basis. Input and social benefit must be reconciled.

--In connection with this, it is necessary more fully to take into account one of the key problems of economic development--the renewal of the production and service assortment. Due to the rapid qualitative changes, it is increasingly difficult to compare the production standards at different times. As yet, it is impossible to measure the rate of assortment turnover.

--Due to the need for increased mobility of all kinds of production resources, it is necessary qualitatively to develop the productive infrastructure and to utilize

it as efficiently as possible so as to reduce all time lags in the national economy--both in the reproduction cycle as such and in the cycle of scientific-technical innovation, including marketing.

- The elaboration of the main trends and of the factors of intensification is of great theoretical and practical importance and this goes also for the elaboration of methods for the systematic control of the intensification processes.

In connection with the problems concerning the main trends of intensification of social production, the Soviet economist Anchiskin discusses questions such as the qualitative changes of reproduction, their measurement and their systematic organization. Among other things, he assumes that the increasingly important role of the qualitative growth factors also necessitates changes in the approach to the development of effective proportions. In my view, he is right in calling for a shift from the predominantly qualitative approach to intensive balancing. In conclusion, he puts emphasis on the following:

- Orientation toward reproduction proportions, to which the overall efficiency of living labor and of the means of production grows faster than does the overall input;
- development of the national economy on the basis of accelerated structural changes and of the goal orientation of scientific-technical progress;
- acceleration of the practical utilization of all types of scientific-technical and production resources in the national economy; reduction of the time interval between input and net benefit. Here too it will be necessary to put greater emphasis on empirical study and measurement. Thus it is no longer sufficient to make theoretical statements on time interval reduction.

Within the framework of the development of advanced socialism, the overall efficiency of social labor is assuming increasing importance. Due to the high rate of growth of the national income that is required for the further dynamic development of the socialist economy and due to the dynamism required in regard to basic assets, labor input, producer goods restoration norms and other indexes, results are achieved in regard to the overall efficiency of living and embodied labor.

There are a number of other problems concerning measurement in connection with the development of the material-technical basis and the implementation of scientific-technical progress. It will be necessary, for example, more thoroughly to research the problem of how to complement--by capital-saving measures--labor-saving trends of scientific-technical progress in the intensification of social production--in accordance with the suggestions made in 1978 at the conference on economic theory. This problem is being discussed in the USSR as well. Our analyses are not yet sufficient. It is not easy to answer these questions, since presently steady increases in labor productivity are still accompanied by a decline in the capital quota in the national economy. At the previous developmental stages, it was not possible to solve this problem. However, there are present all the conditions necessary for developing the technical and technological means that can and must lead to an increase in labor productivity and also to a rise in the capital quota. This is related to the volume of capital already present in the national economy, to its quality, its age structure, etc., but it is also dependent on monetary policy. It

is one of the principles underlying the development of the material-technical basis in developed socialism that an increase in labor productivity is bound up with a rise in the capital quota.

The above examples show that under the present conditions solution of the problems posed calls for intensified empirical research; we need this research, in order to arrive at theoretical generalizations; above all, such research is to enable us through practicable proposals to make an effective contribution to the implementation of the resolutions adopted at the 10th SED Congress.

#### FOOTNOTES

1. Third Session of the SED Central Committee, "From the Report of the Politburo to the SED Central Committee." Speaker: E. Honecker. Berlin, 1981, p 30.
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3. K. Marx, "Grundrisse der Kritik der politischen Oekonomie" [Outlines of the Critique of the Political Economy], Berlin, 1953, p 89.
4. Ninth Party Congress, "Program of the Socialist Unity Party of Germany," Berlin, 1976, pp 26 ff.
5. K. Marx/F. Engels, "Werke" [Complete Works], Berlin, 1956 to 1968, Vol 24, p 322.
6. See "Report of the Central Committee of the Socialist Unity Party of Germany to the 10th SED Congress." Speaker: E. Honecker. Berlin, 1981, pp 59-60.
7. W. I. Lenin, "Werke" [Complete Works], Berlin, 1955-1965, Vol 27, p 247.
8. K. Marx, "Grundrisse....," op. cit., p 312.
9. W. I. Lenin, "Werke," op. cit., Vol 27, p 407.
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11. K. Marx, "Grundrisse....," op. cit., p 330.
12. K. Marx/F. Engels, "Werke," op. cit., Vol 25, p 91.
13. Ibid., Vol 23, p 104.
14. K. Marx, "Grundrisse....," op. cit., p 283.
15. K. Marx/F. Engels, "Werke," op. cit., Vol 20, p 288.
16. Ibid., Vol 23, pp 631-632.

17. Third Session..., op. cit., p 33.
18. See Anchiskkin, "Main Trends of Intensification of Social Production,"  
OBSHESTVENNAYA NAUKA, No 4, 1981.

8760

CSO: 2300/195

EFFECTS OF, OFFICIAL REACTION TO ENERGY COMBINE DISASTER REPORTED

Munich SUEDEDEUTSCHE ZEITUNG in German 22 Mar 82 p 3

[Article by Helmut Loelhoeffel, editorial staff member, datelined "Schwarze Pumpe, in March": "An Explosion Shakes the Balance--Accident at 'Schwarze Pumpe' Energy Combine Shows Just How Susceptible the GDR's Centralized Industry Is"]

[Text] Where once the rustic "Schwarze Pumpe" ["Black Pump"] inn stood, a seething, fire-spewing and stinking monster has spread over the landscape: the most important energy producer in the GDR, the energy combine "Schwarze Pumpe." From its smokestacks pours ochre-yellow smoke, giving off a corrosive stench. Hot steam is forced out from the cooling towers, creating massive clouds. Twenty steel stacks at the gas coking plant send 8-meter-long jets of flame into the air--called in the trade "torching off."

In the surrounding landscape of the Spremberger heath the earth is torn and scarred. Where brown coal deposits have been worked (brown coal is the sole domestic raw energy material of the GDR), open grey pits are left behind. Here and there are signs of efforts at reforestation with birches or bushy Scotch pines. Yet their green, even in summer, can hardly make any improvement in this ailing landscape where the hub of the gigantic "Schwarze Pumpe" is boiling.

Almost 20,000 workers, engineers, managers and scientists are employed in this monster operation--an energy combine built starting in 1956, whose production chain ranges from brown coal extraction to urban gas distribution. Most of the employees live in the 15-kilometer-distant new town of Hoyerswerda in monotonous apartment complexes built in characteristic GDR fashion in prefabricated slab-like modules.

At noon on February 22 the work force and the surrounding inhabitants were alarmed by an explosion and a foul stench (suggestive of rotten eggs). At the center of the "Schwarze Pumpe" plant a high pressure gas storage tank had exploded. Ever since this "black Monday" members of the reconstruction and repair brigade have been working around the clock to clear the damaged area and to repair the devastated gas cleaning facility. Workmen, supported by members of the standby police and specialists from all parts of the country, are waging what the local SED newspaper LAUSITZER RUNDSCHAU calls a "struggle for the GDR's urban gas supply."



Immediately after the accident--one workman was killed--SED secretary-general Erich Honecker himself took over direction of operations. He ordered the Politburo to set precise deadlines for the reopening of the plant. Neither expense nor effort were to be spared in keeping to the timetable. The SED leadership, informed by Herbert Richter, director-general of "Schwarze Pumpe" and member of the central committee, recognized immediately what the destruction of the gas cleaning facility meant for the country. More than half of the gas supply for households and factories in the entire GDR was produced here and distributed to all regions of the country through a computer-controlled pipeline network. The GDR's economy was hit at one of its nerve centers and continues to be stricken. Rebuilding has "political significance" as plant director Richter constantly stressed to the damage control and construction teams working at the scene of the accident "with truly heroic dedication" (LAUSITZER RUNDSCHAU).

Nonetheless--thanks to Soviet assistance--12 million cubic meters of gas are being delivered daily. Yet this is still nearly 10 percent less than planned consumption. Private households have been spared breaks in service, but industrial production has been affected. Entire sectors of industry, particularly chemicals, metallurgy and electronics have suffered from continued failures of gas supply. Just how great the dependence is upon gas deliveries from "Schwarze Pumpe" is evident from these figures: in the first few days following the accident some 1,000 plants were forced to shut down temporarily because central, gas-dependent production plants were closed. The GDR has been incurring losses through the breakdown of production amounting daily to an estimated 10 to 15 million marks (East). The explosion at the gas plant will also have significant effects upon the balance of the national economy; the high quotas set for reaching planned production goals can hardly be met if such unpredictable interruptions occur. A good deal can be recouped through cautious use of energy, but buyers of GDR products will not accept excuses for declines in quality or delayed delivery dates.

The consequences of this accident reveal how vulnerable the entire industrial structure of the GDR is if a serious breakdown occurs at just one point. The reason for this vulnerability is to be found in the centralization of all sectors including energy, which was concentrated in the Cottbus district, where "Schwarze Pumpe" is only one of five major brown coal power plants. The SED has ordered that the first destroyed section of the gas-cleaning and mixing facility be restored by 30 April, the second by 30 June. Those factories dependent upon gas from "Schwarze Pumpe" will in the meantime have to manage with less gas and make up for production arrears, mostly through overtime work on weekends.

The cause of the explosion is still undetermined; practically nothing has appeared in the GDR press concerning its consequences except in the LAUSITZER RUNDSCHAU--save for glowing headlines reporting such successes as "Workmates Restore Gas Net" or "Gas Supply Generally Assured." A commission headed by the minister for coal and energy supply, Wolfgang Mitzinger, has not yet been able to announce even interim results of its investigation. Either the person responsible for the accident actually cannot be identified or his identity is being suppressed. As a rule, when state officials fail

in their function or when legal controls are not adhered to, the GDR takes severe action regardless of the prominence of the person involved. But if material fatigue is found to be the cause or spare parts were unavailable or if the facility had been oversorked because of pressure to fill a quota, the investigators proceed more cautiously so as not to see blame fall upon the responsible SED.

At "Schwarze Pumpe" (or "Carna Plumpa" as it is called in Sorbian, the language still spoken in this region by the single national minority in the GDR) it has been rumored that saboteurs could have played a part and opened one or two gas valves too wide. There is no proof but there are indications that most major industrial accidents, such as the one at "Schwarze Pumpe," have generally occurred during work breaks.

9878

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U.S. SEEN HAMPERING POLAND'S IMF MEMBERSHIP

Budapest HETI VILAGGAZDASAG in Hungarian 27 Mar 82 pp 7, 8

[Excerpts] The once daring Western bankers have become quite bashful this Spring: hiding behind the skirt of their governments and the various international financial institutions, they await the revitalization of money markets.

The PAP Polish news agency recently announced that in the middle of March Poland paid the last portion of interest it owed to Western banks from last year. In connection with this Jan Woloszyn, Vice-President of the Handlowy Bank remarked: "The procurement of the missing \$290 million required a great effort." Reports from the West German business community indicate that after a pause of several months, Poland has resumed coal shipments to capitalist countries.

According to reports, Poland will have several years' grace from Western banks for the repayment of loans which were due last year. But this applies only to commercial banks, Western governments are remaining restrained for the time being in their reaction to the Polish request for rescheduling. They refer to the 11 January NATO ruling according to which the rescheduling of government loans to Poland should remain suspended until further decision. Despite this, Western creditor governments, which have formed the so-called Club of Paris, will have to deal with an East-European client in the coming months: at the request of creditor banks, Romania has asked--at least according to the British newspaper ECONOMIST--for the reconvening of this intergovernmental forum.

Differences between the [hard currency] troubles of Poland and Romania are not restricted to the respective size of their debts alone: A further difference is, for instance, that Romania is a member of IMF but Poland is not. (According to information acquired in Washington, the American government is trying to persuade the leadership of IMF not to deal with the Polish application submitted last year for the time being.)

Doubtlessly, Western banks have changed their attitude during 1981. While earlier they demonstrated considerable ease in providing credit to the central banks of socialist countries on the basis of their own judgement, now they prefer to stay in the background and await the directions and attitudes of their governments and the international financial institutions. This inevitably narrows, at least temporarily, the sources of credit regardless of how a debtor is judged otherwise by the financial world at large.

## NAMES OF CONSULTATIVE ECONOMIC COUNCIL MEMBERS PUBLISHED

Warsaw ZYCIE WARSZAWY in Polish 8 Apr 82 pp 1, 6

[Text] (PAP)--As reported earlier, the Council of Ministers adopted a resolution on the appointment of the Consultative Economic Council. The idea of establishing an advisory governmental body of this kind was originally offered by Premier Wojciech Jaruzelski, general of the army on 24 September 1981. It was given concrete shape at a Sejm meeting on 30 October.

The council is composed of noted representatives of scientific and intellectual communities appointed by the chairman of the Council of Ministers. The council is chaired by Professor Czeslaw Bobrowski, an outstanding Polish economist.

At his motion, the chairman of the Council of Ministers called upon 26 persons to serve on the council: Professor Adam Andrzejewski, a specialist in housing problems from the SGPiS [Main School for Planning and Statistics], Professor Ryszard Badura from the Agricultural Academy in Wroclaw, Professor Ludwik Bar from the PAN Institute for Government and the Law, Professor Andrzej Burda, from the UMCS [Marie Curie Sklodowska University] Institute for Administration and Public Law in Lublin, Konstanty Chmielewski, director of the nitrogen factory in Kedzierzyn, Professor Kazimierz Dziewonski, territorial planning specialist at PAN, Professor Jerzy Dierffer, naval construction specialist from the Economic Academy in Krakow, Professor Juliusz Gorynski, serving on the PAN Committee 2000 [architecture and urban planning], Doctor Stefan Jedrychowski, retired economic activist, Professor Mieczyslaw Kabaj, Institute for Labor and Social Welfare (employment and wages), Professor Zygmunt Knyziak, SGPiS (economic policy), professor Jan Lipinski, SGPiS (economic policy--pricing), Professor Aleksander Lukaszewicz, Warsaw University (planning and nonmaterial services), Zbigniew Majer, director of the Marchlewski Plant in Lodz, Professor Ryszard Manteufel, PAN agricultural economist, Professor Wladyslaw Markiewicz, PAN sociologist, Aleksander Marszalek, director of the Kietrz agricultural complex, Docent Witold Morawski, Warsaw University (sociology), Professor Mieczyslaw Nasilowski, SGPiS (economic policy), Professor Krzysztof Porwit, SGPiS (planning and economic policy), Eugeniusz Pustowka, director of the Lenin Steelworks, Professor Stanislaw Raczkowski, SGPiS (trade and international financing), Stanislaw Stanczykiewicz, director of the Ursus association, Professor Wacław Wilczynski, University of Poznan (economic systems), Professor

Piotr Zaremba, urban planner, retired professor of the Polytechnical University of Szczecin. Docent Wieslaw Rydygier became the council's secretary general.

In keeping with the substance of the Council of Ministers' resolution, the Consultative Economic Council will be presenting assessments and conclusions on key problems in economic policy, primarily those concerning the assumptions on economic growth and utilization of the country's natural resources, systems-type changes, pricing and wage policies, financial and credit policy, foreign trade, balance of payments and market equilibrium. The second domain of the council's activities will be key problems in social policy, including changes in the population's standard of living, the system of social welfare and directions for development of the nonmaterial service sector.

The council will initiate periodic appraisals of the condition of the economy, of developments in the economic situation and conclusions dictated by them, and of the functioning of the planning and management system. Such appraisals will be submitted to the chairman of the Council of Ministers. The council will also initiate public opinion polls and preparation of expert assessments concerning particularly important social and economic problems.

Chiefs of economic ministries and other central offices have been placed under the obligation to collaborate with the council. Likewise, the principles were determined for its contacts with scientific institutions, social organizations, labor unions, self-government bodies, creative associations and other organizations. The council will inform the public about its work. It was decided that individual members of the council will, in the course of the council's activities, hold their positions exclusively on their own behalf, being in no way constrained by the views of government offices or any organizations.

8795

CSO: 2600.494



## 'LE FIGARO' ASSESSES POLISH ECONOMIC SITUATION

PM020909 Paris LE FIGARO in French 30 Mar 82 p 4

[Dispatch by Bernard Margueritte: "Polish Economy Squeezed by USSR and CEMA"]

[Text] Warsaw--One of the avowed reasons for introducing martial law was, much more than the confrontation with Solidarity, the rapid deterioration in the economic situation and the resulting sociopolitical dangers. Unfortunately, far from improving, the economic situation is constantly worsening and at a very rapid pace.

To remedy that, the Polish leaders first appealed for Soviet aid, especially during General Jaruzelski's visit to Moscow. It was granted to them but at what price? Moreover nobody could be surprised by the conditions imposed by the Kremlin which intends that Poland should, on the one hand, honor its export pledges to the USSR and to the other CEMA countries and, on the other hand, continue to pay its share of the Warsaw Pact military budget. Indeed the solution adopted was to create a whole sector of the Polish economy which is going to work with raw materials imported from the Soviet Union and the other CEMA countries but whose production will almost all go to those states.

According to a study from usually well-informed circles, almost 60 percent of light industry, around 40 percent of the chemical industry, the naval dockyards, a section of the iron and steel industry and of the machine industry will now operate in those conditions. This arrangement has only one advantage for Poland: It will reduce the extent of unemployment by enabling factories to engage in production thanks to Soviet raw materials (in any case official circles admit in private that there will be around 400,000 unemployed people by the end of the year). On the other hand the disadvantages are obvious: This solution will increase inflation, the Polish workers being paid for producing goods which will not remain in the country. Supplies for the domestic market will be even lower. Finally Poland will use its energy resources and its transport means to serve the Soviet Union.

Moreover the Polish enterprises operating under that system will not make do with exporting their production, they will in fact be including in Soviet planning and organization. In addition despite everything the Soviet Union will supply a 20 percent smaller quantity of raw materials this year than last

year. Furthermore priority will have to be given to factories working for the Soviet market in the allocation of those raw materials. The Polish authorities thus lose control of the resources at their disposal. This is a very far-reaching integration of the Polish economy into that of the Soviet Union or even, as the document says, a development which pushes Poland "into the position of a Soviet colony."

#### Four Hundred Thousand Unemployed People Soon

It is estimated that Poland would need new credits of around \$7 to \$8 million per year to overcome the crisis. The West cannot and will not supply that aid. The economic sanctions surprised the Polish leaders. If inflicted on a healthy system they would have had little effect. They are having a terrible impact on the moribund Polish economy. Sixty percent of Polish industry's cooperation imports come from the West and that is why many of the country's enterprises are being forced to stop production. To obtain credits, even very short-term credits, it is necessary to have a positive balance of trade. It has therefore been decided to reduce imports by 30 percent again. In these circumstances the national income, already down by 25 percent at the end of 1981 over what it was at the beginning of 1979, will fall by a further 15 to 20 percent this year. The supplying of the market and the population's standard of living will therefore experience a new fall. And the agricultural situation is deteriorating and program to modernize military equipment (much of which is obsolete) is being launched.

The military authorities are facing a fundamental dilemma which other socialist countries are experiencing: How can the maintenance of inflexible central control be reconciled with the need to introduce reforms? There is scarcely any solution for the socialist countries because you cannot hope to have both a system of oppression and an efficient economy.

Is there no means of overcoming this? According to a joke being told in Warsaw--fortunately everything here ends in a joke--there is at least one. A desperate General Jaruzelski goes to ask Lech Walesa how supplies could be improved, the drastic housing crisis overcome and prevent such large crowds in the churches. Walesa asks for full powers for 2 weeks. Once the time is up Jaruzelski returns and cannot believe his eyes: The stores are full, everybody has a home and the churches are empty. He is flabbergasted and asks the Solidarity chairman for his secret. The latter replies: "It is very simple, I closed the Eastern border and the stores filled up. I opened the Western border and there was no longer a housing crisis and I ordered prayers to be said in church for Brezhnev." Unfortunately there is little chance of that solution being adopted.

CSO: 3100/566

MINISTER INTERVIEWED ON CONTINUING ECONOMIC CRISIS

Warsaw ZYCIE WARSZAWY in Polish 30 Mar 82 pp 1,6

[Interview with Minister Jerzy Gwiazdzinski, Deputy Chairman of the Planning Commission, by Henryk Chadzynski: "What is the Way Out?"]

[Question] The topic of our interview is to be a program for surmounting the crisis, or rather its new version being formed at present. Before that, however, I should like to return to the discussion which, with your participation, was published in an end-of-September issue of ZYCIE WARSZAWY in 1980. Actually, that had been the first time when the crisis was spoken of as such in our press. At that time you mentioned five main directions of action needed to restore the equilibrium.

[Answer] As it happens, these directions remain valid.

[Question] In all this, properly speaking, the most progress has been made on the work to prepare and introduce changes in the planning and management of the economy. The other issues, such as restrictions on investments, the conversion of production to the benefit of the consumer and agriculture, and the shifts in employment have been meeting with resistance. Actually, some consistent action should be finally be taken regarding these matters. Altogether, though, at that time the period needed to restore the equilibrium and regain a normal economy had been estimated at 3-4 years.

[Answer] Yes, but at that time the economy still had not been undermined by all those actions which reached their culmination in 1981 and led us to the brink of the abyss. Let me remind you, in this connection, of the comment made by Prof Mieczyslaw Mieszcankowski at that discussion concerning the social contract and its two-sided nature, i.e. that such a contract includes not only the government's obligations to make payments and increase purchasing power--it must also be accompanied by another element of a sound economy, namely, the strengthening of the equilibrium, the strengthening of labor discipline which contributes to a greater supply of goods. But, as known, this had not happened.

[Question] On the other hand, what came true was your prediction that an increase in payments that are not offset menaces us with what you called a barbaric inflation, that is, a shortage of goods and an underground market which, as you then had said, are inevitable. We experienced this on our own skin, although not everyone is aware of the interdependence of production, productivity, and market equi-

librium. But now, in your estimation, how long will be the period needed to regain the equilibrium?

[Answer] The new version of the program for surmounting the crisis envisages that, given favorable external conditions and a successful fulfillment of the premises of that program, the recovery of the pre-crisis level of industrial production will be possible within 3-4 years--and of the pre-crisis level of national income, within 5-6 years.

[Question] But do you not think that the recovery of the economic equilibrium, the surfacing from the bottom in order that we all may live better, requires making a choice? It requires unpopular decisions, with a conflict between the desire to retain social protection and the increasingly limited possibilities. As a result of the attitude so far, we shall sink deeper and deeper into new troubles and will neither provide social services nor emerge from the crisis.

[Answer] This is a basic conflict that must be resolved along with several other fundamental conflicts. There is an urgent need for effective action to increase labor productivity. This requires rebuilding the system of social incentives, and hence also differentiating wages according to the labor contributed. At the same time, we are aware of the strong egalitarian trends present in our society.

[Question] This matter seems particularly complex, because the compensation payments [accompanying the recent price increases] have in principle undermined the traditional wage structure. That structure may have been open to criticism but the compensations paid are such a substantial part of wages that considerable funds will be needed to restore the incentive system.

[Answer] Indeed, the restoration of the incentive system generally requires linking the monetary income of the population to, chiefly, the increase in material production and labor productivity, but at the same time the requirements of social policy have recently resulted in a marked rise in income deriving not only from compensation payments but from social welfare. We have more such contradictions, because considerations of financial-market equilibrium require channeling the largest possible part of our consumer goods output to the domestic market, to meet its demand. But at the same time, in view of the urgent need for imports, we must export as much as possible, because without revenues there will be no production for both the domestic market and exports, since there will be nothing to produce from. In addition, the traditional interpretation of the right-to-work principle continues to conflict with the need to reduce employment in many sectors and assure an increase in labor productivity.

[Question] Where then do you perceive the most critical points of this complicated economic situation to lie?

[Answer] There are two such spheres. The first relates to the external system. This chiefly concerns increasing the exports. This is the only road toward regaining credibility of the economy, and at the same time, at present, the only way of increasing the imports of producer goods. This also concerns increasing the share of CEMA countries in our trade. But there is also another critical point, which is related to the factors that had led to the crisis and that at present must be decisive to our emergence from it. I refer to the reduction in the social costs of production.



[Question] This has been discussed for a long time but, unfortunately, practical action in this respect so far has been modest. This is due to the operation of strong pressure groups protecting their vested interests and preventing the painful but imperative discontinuation of the production of all that is keeping us back. This means all types of production whose cost is much higher than the income from them, where the price of the product is lower than that of the raw material used to manufacture it.

[Answer] I believe this to be a fundamental issue. We cannot continue to occupy the traditional positions and look on passively at such happenings. Within the next 2-3 years the social costs of production must decrease; this is to be influenced by processes of a twofold kind. First the redeployment of fixed capital and labor force and, second, the reduction of unit production cost owing to lower consumption of materials, changes in variety of output, increased qualifications, and tightening of labor discipline. Increasing the social productivity of labor is in general a basic condition for emerging from the crisis.

[Question] This entails, however, breaking with the traditional practice of resisting any reductions in force no matter what and regardless of the actual personnel needs of a plant.

[Answer] I believe that the economic reform regulations will change this attitude. The solutions inherent in the reform should result in increasing the level of employment in the enterprises with growth potential, especially service enterprises and small industry. This will require during the next few years a reduction in the unutilized manpower reserves of heavy industry and construction on a scale of 600,000 to 800,000 persons.

[Question] Who should be the first to be affected by such processes? What are the pertinent objective criterions?

[Answer] I believe that during the period of the greatest supply problems the reduction in social costs of production should be effectuated by giving priority to the discontinuation of production at plants with the highest production costs and the highest indicators of consumption of fuel, energy, and materials. I believe that this will yield to us substantial savings in the consumption of raw and other materials and fuels per output unit.

[Question] But will the policies pursued be sufficiently vigorous to assure the absorption of such a vast labor force by other sectors, such as agriculture or services?

[Answer] I can only mention here that, in accordance with the declarations made, a policy assuring solid economic prospects for private agriculture will be pursued. Here the decisive thing is not words but deeds--improvements in the supply of mineral fertilizers, pesticides, and agricultural machinery, equipment, and implements. The agriculture supply system will be streamlined, as will be, at the same time, the system for procurements, storage, and utilization of farm produce. As regards small industry, everything is being done to make it a sector with equal

rights in our economy. The development of small industry may become a major factor in productive employment, and that industry itself may become an indispensable supplier of many needed products to the domestic market as well as for export, and also a co-production partner.

Despite the known difficulties, it is exactly in socialized small industry that an improvement has taken place. Last January a 4.5-percent increase in output was achieved, and in the last two months the level of output was close to that achieved in a like period last year. But for industry as a whole, both in January and in February, the decline in output exceeded 13 percent.

[Question] The enemy number one, both of the economic reform and all stabilizing measures, is inflation. What concrete steps will be taken to restrict the spread of this cancer?

[Answer] The fight against inflation requires both demand-regulating measures and mechanisms stimulating an increase in production and supply. Besides, I believe that an increase in production by means of economic measures is a fundamental condition for counteracting the market effects of the inflationary gap. Thus there is a need for a coherent supply policy, as well as for a consistent incomes policy to counteract the pressure of wages.

It must be explicitly stated that the protection of the public against the growing inflationary spiral requires a wage freeze and the suspension, for at least three years, of the introduction of any new social benefits and services as well as of increases in the existing benefits and services. At the same time, it is necessary to prepare and introduce as of January 1983 unified personal income tax principles applying to all incomes regardless of the nature or source of their origin.

At the same time also, the progressive income tax should be so constructed that, while allowing for budget revenues, it would not discourage taxpayers from being interested in increasing their individual income and thus also motivated to work and operate productively and effectively. All such actions promoting an increase in the role of money and the value of the zloty, coupled with an appropriate foreign-exchange policy, are an indispensable prerequisite for the policy of stabilization. As can be seen, just like one and one-half years ago, I repeat that the surmounting of the crisis must unfortunately be a painful operation. What is important, though, is that the therapy produce the expected results. We all are interested in this.

1386

CSO: 2600/475

SUPPLY, SIGNIFICANCE OF PESTICIDES DISCUSSED

Insufficient Attention to Pesticides

Warsaw ZIELONY SZTANDAR in Polish 14 Mar 82 p 7

[Interview with Prof Dr Szczepan A. Pieniazek: "Science--Technology--Agricultural Progress" subtitled: "Formula for Disaster" by staff writer Janusz Tarniewski, date and place not specified]

[Text] [Question] Several days ago Jerzy Wojtecki, Minister of Agriculture and Food Economy, called into session the tenth session of the Scientific-Technical Council. Sir, for the third time you have been appointed chairman. What is the purpose of the Council?

[Answer] It is an advisory body to the minister and to the directors of ministerial departments. Of course we don't have any decisive vote. The minister makes decisions himself, unilaterally, or collectively with the ministry's collegium. However, it would be unfortunate if they did not seek advice from scientific workers. This then is the purpose of the Council: to prepare expert opinions, views of experts on all aspects of Polish agriculture.

[Question] Public opinion of the advisors is very low. We have experienced during the last decade that committees have normally served as screens for the decision makers' license.

[Answer] This is true. All the councils, with all the ministries, had a very limited influence on what was really going on in the country. Actually, as far as agriculture is concerned then the majority of all decisions are made outside of the ministry--by the Central Committee [KC] or by the Chief (Executive) Council [NK].

This does not mean that this Council does not have any influence on the current ministry policies. However, our advice is not always accepted. A very typical example of this is the Agrarian Management Commission of the Scientific-Technical Council which had vigorously protested creation of large farms and the unheard of, wasteful management practices in the Agricultural Circles Cooperatives [SKR].

Let us hope that, in the same measure, there will be no going back to the pre-September policies and equally, that current policies regarding scientific advisory bodies will also become a thing of the past.

[Question] Is this your only wish, Sir?

[Answer] It is too early to form an opinion. It appears that the climate is improving for science. There is no doubt about it. But still, we do not expect that all our proposals will be accepted. At least we do not pretend to be infallible, however, we shall protest very vigorously if no one pays attention to our opinions.

[Question] Would such protests include resignation from the Council?

[Answer] I really don't know. Should such an occasion arise then I shall give it serious consideration. However, I believe that if it should come to serious differences I would probably resign as chairman of the Council.

[Question] What is the professional profile of the Council?

[Answer] Almost exclusively scientific workers. There are deans of some agricultural academies, directors of some ministerial departments, other distinguished scientists, some active economists and two private farmers.

[Question] Which of the current farming problems are considered to be most pressing by the Council?

[Answer] During our first session we discussed the program submitted by the ministry for the development of agriculture and food economy for 1981-1985. We reacted very negatively to the part pertaining to plant protection.

It is a well known fact that farm production depends on the means of production which are made available to the farmer. Chemicals play a very important role. Until now, everytime someone mentioned chemical preparations, one thought mainly of fertilizers. In every five-year plan there has been provision for how much NPK [Nitrogen, Phosphorus, Potassium] would be allocated per hectare. It has never been stated how much pesticides would be allocated. And yet, that is the biggest tragedy of the agriculture.

The Plant Protection Institute in Poznan prepared a report which indicates that in 1980 due to neglect of plant protection we lost about 11 million tons of potatoes, four million tons of grains, and a million tons of garden vegetables and fruits. Of course the actual drop in the harvest was even larger than the cited amount. Weather has also played a large role in the losses. The cited amount of crop losses was adjusted to reflect only that portion of the losses attributed to insufficient or completely lacking plant protection. This is terrible! Had we been able to harvest those four million tons of grain we could almost have been able to do without grain imports. This is the reason we started calling for pesticides. And so, finally, for the first time in the history of agricultural program development, it has been officially stated what amount of pesticides would be made available.



[Question] What has our consumption of pesticides been up to now?

[Answer] In 1979, our best year, it was about 0.8 kilograms (kg) per hectare calculated on a pure component basis. Meanwhile, in Japan pesticide consumption amounts to 11 kg. Well, in Japan things are done the Japanese way. However, in CEMA countries the average consumption is 3 kg. But in GDR, where the soil and climate are similar to ours, it is 5.7 kg. That 1979 consumption of pesticides in Poland was a record high. The next year it fell to 0.41 kg.

This is terribly wrong. I am of the belief that the person responsible for this state of affairs should be criminally prosecuted. What it would have amounted to and still does, is a question of an expenditure of few tens of millions of dollars which would have made it possible to prevent crop losses valued at several hundreds millions of dollars

It has finally been approved in the agricultural development plan for 1981-1985. By the end of the current five-year plan we will be getting 2.5 kg pesticides per hectare.

[Question] From where will it come?

[Answer] We must have it. Some will be made by our industry and some will have to be imported. When imports are justified it is normally necessary to enumerate all gains and indicate time or year when the import invested dollar will be returned. This particular return is different, when we, the farmers, import in March we [get our] return already in September.

Meanwhile we have to admit that we simply don't have any of our own pesticides. However, currently this is not so important as the relationship of the chemical industry to the needs of farm production. The best example of this is the appendix to the plan of the Ministry of Agriculture submitted from the Ministry of Chemical Industry and Light Industry which, incidently, was declared to be a piece of arrogant writing, as judged by the members of the Scientific-Technical Council.

[Question] Why?

[Answer] Well, it's like this: if the chemical industry stated: "Dear people, we would like to supply you with pesticides but we are unable to do so. We have no raw-materials, machinery, foreign exchange [for imports].... We simply cannot do it." -- Then, all right! -- But they didn't do it that way, they did not explain anything. To state it briefly, the justification of the chemical industry boils down to this: "You peasants are too stupid to be entrusted with such a thing in your hands!" In the appendix from the Ministry of Chemical Industry and Light Industry to the agricultural program of the Ministry of Agriculture it is stated: "An achievement of a pesticide consumption indicator, per one hectare in 1955, which would be triple of the amount currently utilized is unrealistic." And further on: "Such rapid increase of utilization of strongly toxic chemical substances /would demand a

a simultaneous demonstration of a considerably greater discipline by the consumer!//

Every CEMA country has discipline but we don't! Is it any wonder that one gets an urge to grab them by the throat? Should the same people in the chemical industry decide to do us any more favors with their products--things will not turn out too good!

Unfortunately the Council carries no weight with the chemical industry. We only hope that the press will take up this matter and that the Minister of Agriculture will draw his own conclusions.

There is also a lot of other nonsense. The next session of the Council will address itself to the question of ministerial level scientific institutions. Here's the problem: It has been decided that industrial scientific institutions have to be self-financing. If the factory needs them then let the factory pay for them--or so it was to be justified. Unfortunately, efforts are underway to have the ministry level agricultural-scientific institutions administered in the same manner, this makes no sense at all. What this means is that I, as the Director of Horticulture and Floriculture Institute, have to make my rounds of the farms, to make a collection, so that I may obtain monies with which to conduct research! Even if I went [only] to state collective farms (PCR) I would have to visit several hundred of them where there are orchards....

They also told us that we will receive as much money as we did last year. This means that we will have to fire 40 percent of scientific workers. However, the agricultural industry, as compared to the national standard, spends less than half of the amount of money on research compared to other industries. They say that they care about food, but this is not the way to care about agricultural science!

The agricultural industry is short of everything: machinery, tools, fertilizers, pesticides, etc. It has been established long ago that science is also a means of production. And it is a means which does not require imports, because we own our brains.

To change the subject...Is it not a scandal that the agricultural press, in this respect, will be assigned last priority? I have made an official protest in this matter to the Minister of Agriculture. We can live, even for a full month, without "PERSPEKTYWY" or "POLITYKA," but to deny the farmers their [needed] agricultural publications in spring? Do these editors need some sort of affirmation that the process of growing grass will be presented in proper political light? Farm publications are apolitical!

Here it is the end of February and still there are no farming publications. And they talk about support for farming and about the need for greater farm production. This just doesn't make any sense. If the farmer does not receive the latest information in March then Spring will be lost and the year will be wasted!

The next subject I would like to discuss is grain management. There are data which indicate that, due to a lack of herbicides, about 70 percent of the nitrogen [fertilizer], which we spread on our grains will be consumed by weeds. In other words we are fertilizing weeds not grains.

Speaking of self-sufficiency in grain cultivation, it is not just a matter of sowing more acreage. In proper production one must eliminate all factors which limit grain harvests from each hectare. If we succeed the harvest will improve by several quintals. It will then become unnecessary to persuade the farmer to plant more acreage, he will do it at his own initiative.

[Question] Thank you for the interview.

#### Possible Domestic Resources

Warsaw CHLOPSKA DROGA in Polish 14 Mar 82 p 4

[Article by staff writer Anna Turska: "Crop Protection From Domestic Raw-Materials'--'Chemical Industry in Face of Necessity."]

[Text] Foreign exchange has become unavailable, and so have the credits and all of a sudden it became evident that we have nothing with which to protect our crops. Pests, disease and weeds are able to destroy with impunity almost one-fifth of all that is grown in the fields. Unfortunately, those years when the farm had at its disposal a whole gamut of good pesticides with foreign sounding names are gone forever. There are very few domestic names in this context. Almost all domestic pesticides come from the Institute of the Organic Industry (IPO). Here, work is underway on new synthetic compounds, their biological evaluation, development of useful form and manufacturing technology.

#### Sulphur and Copper

Our country has ample resources of copper and sulphur. Chemical compounds of these two elements form an active component of several fungicides. Some years ago, orchard growers based their protection against fungal diseases on bordeaux misture and lime sulphur. Later, more modern preparations appeared and apparently those two liquids fell in disuse. "KAPTAN" and "SYLLIT" are definitely better, however, there is no foreign exchange available for their purchase and so, we must turn to more traditional means. Bordeaux misture used to be prepared on the spot by orchard growers, by mixing copper sulphate with slaked lime. Occasionally it exhibited a phytotoxic effect, blocked spray nozzles and made spraying difficult. Generally this was caused by not mixing the components exactly and also by the quality of utilized lime. In order to eliminate these drawbacks the IPO proposes that pre-measured portions of lime and sulphate be prepared, in exact proportions, commercially so that the farmer will be able to dissolve and mix them directly in the sprayer tank. When such solution is prepared exactly according to instructions, it will have proper acidity and will not exhibit any phytotoxic properties. Experiments have already been conducted at the Horticultural Institute and the results are encouraging. There is also a great deal of interest among the orchard growers.

All that is now left to do is to initiate production at one of the chemical plants, probably in Tarnowskie Gory where copper sulphate is manufactured. There are deliberations going on now (hopefully needlessly) as to whether such pre-measured components constitute a pesticide [as defined by law] and thus whether they should be subject to registration, a process that would certainly lengthen the whole matter. Or, will it suffice to prepare a good set of instructions for preparation and application of this [perfected form] of bordeaux mixture. It appears that the latter solution would be more beneficial to our orchards.

And not only orchards.... Application of bordeaux mixture to combat potato blight have been researched. The results are positive, therefore, the matter deserves initiation without delay.

#### Lime Sulphur

This sulphur preparation, which combats powdery mildew and apple tree scab, has also fallen into disuse. However, when the need arose it also has been remembered. Already last year the IPO was looking for a manufacturer. For some time now, the Agricultural Producers Cooperative (RSP) in Brzostowiec was making about 300 tons of it per year. The need for the compound is great, Chemical Works in Sarzyn have also commenced production, however, they seem to have some problems with packaging. Because the manufacturing process results in a large number of waste products, it would be more advantageous if the manufacture was divided among several smaller enterprises, preferably located in regional horticultural centers. Then there would be fewer problems with packaging and transportation. Currently lime sulphur is being manufactured in Sarzyn, RSP Brzostowiec and RSP Budy Zaklasztorne. A specialist--Dipl Eng Kluczynski, is also preparing to start production in Siedlce voivodship. Some 600 tons of the liquid will be produced by April and about 2,000 tons during the entire years. This amount will already have a considerable impact on our impoverished pesticide market.

#### Specialties from Jaworzno

At the chemical plant "AZOT" in Jaworzno certain copper preparates are being produced with obsolete machinery, such as "MIEDZIAN 50," "CYNKOMIEDZIAN" and "MANKUPROX." They are able to produce about 300 tons of these which is definitely too little for our needs. The Sarzyn plant working in cooperation can manufacture an additional 100 tons of copper oxychloride ("MIEDZIAN 50"). The demand is far greater and the plant needs to be enlarged.

The IPO has developed modern technology for copper oxychloride manufacture. Copper scraps may be used in the process, it produces less corrosive waste products and the final product is characterized by its exceptional purity. Part of the old installation may be utilized, the rest will have to be newly constructed. According to latest estimates construction of the plant could be accomplished in two years. This would make it possible to produce about 1,000 tons--still too little. Negotiations have been undertaken to interest other factories in "MIEDZIAN" production. In a short time production

will begin at the Wola Krzyztoporska Chemical Works and later on at the "STOCHEM" plant in Warsaw. This would make it possible to double the deliveries of this essential fungicide.

In Sarzyn

This plant manufactures primarily sulphur preparations like "SIARKOL EXTRA," "SIARKOL K" and "SIARKOL N," which are in process of being registered. Also manufactured is "FUNABEN 50," a fungicide against powdery mildew and other fungus diseases. This is an extremely important group of preparations which are needed by a modern orchard and also, to an ever increasing degree in the cultivation of some grain varieties.

Possibilities for "SIARKOL EXTRA" production are considerable, however, it has lost popularity during the past few years because horticulturists had at their disposal some more modern preparations. Now it will be necessary to apologize to "SIARKOL." Also being manufactured again is a mixture of "SIARKOL" with Tiuram (TN: Thiourea?) which corresponds to "KAPTAN." This mixture was researched some years ago by IPO however but production was not started at that time.

"SIARKOL K" is a very modern preparation, it is used in combatting grain fungi. As the degree of grain fertilization increases, grains are becoming increasingly more susceptible to diseases, lowering the harvest by about five quintals per hectare. We have domestic possibilities to manufacture our own preparations, "SIARKOL" and "FUNABEN," which means that we do have at our disposal something with which to save those missing tons of grain. We need, however, to enlarge the plant in Sarzyn which, at present, produces barely 2,000 tons of sulphur preparations plus "FUNABEN." We have an abundance of the basic compound--sulphur. We can also utilize waste sulphur from gas works in the manufacturing process which if not utilized will become an ecological hazard. Such attempts are already underway at Walbrzych and Larow because Sarzyn production alone cannot satisfy even the scaled down requirements.

There is a saying about necessity being the mother of invention. This can be adapted to the actual situation in plant protection. When the foreign exchange became unavailable it became necessary to quickly put in motion manufacturing of the most needed pesticides. This has proven to be possible despite mounting obstacles. There would be no need for such a "last minute mad dash" if only during the past years, we had fulfilled investment plans for factories which manufacture pesticides. There were such plans, beautiful plans--as is always the case with us. Unfortunately, they fell through, one by one, for lack of consistency and farsightedness.



## SUPPLY OF CHEMICALS FOR AGRICULTURE DISCUSSED

### Summary of Situation

Warsaw ZYCIE GOSPODARCZE in Polish No 7, 7 Mar 82 p 6

[Text] From among 14 operational programs, as many as five are directly or indirectly tied to agriculture and the production of food. One of them deals with a key area--the supply of fertilizers and pesticides.

It is not necessary to write about the need for increasing fertilization--it is obvious. The current level of supplies does not meet the demands of agriculture and recently, instead of improvement, regression has taken place. Production quantities of fertilizer, written into the program for the current year, are supposed to ensure--as is anticipated--supplies at a level closer to that of last year. I have found out, however, from representatives of the agricultural ministry that the implementation of this endeavor is not progressing well at all. And what's more--judging from the amount of supplies in the second half of 1981 and in the first months of the current year [1982] as well as on the basis of exhausted supplies on the market--the index of fertilizer use per hectare will most likely take shape below plan projections and last year's level. The current state of agricultural supplies is being written about in an article concerning the preparations being made for an agricultural spring.

From information obtained in the ministry of the chemical industry, it appears that the fertilizer industry obligated, after all, by the operational program, is doing everything so that this year's production will not be worse than in 1981. This concerns nitrogen and phosphorous fertilizers. Potash fertilizers, on the other hand, are imported from the USSR and GDR and there are no problems with deliveries (and because there are large supplies, the amount of deliveries will even be limited).

The operational program envisages the following production of fertilizers (in thousands of tons, pure in composition and counting the calendar year period):

	Production 1981	Projected for 1982
nitrogen	1,282	1,350
phosphorous	878	1,010
potash	1,520	1,200
lime	2,300	2,540

The chemical industry--as is noted in the ministry--is met with understanding by its partners and has, to the extent possible, ensured priority in the supply of electric power, coal and to a lesser degree--gas. If supply reductions do occur, then it is because of real necessity and not due to underestimating the needs of this industry. Fertilizer manufacturing factories are, however, completely dependent on these supplies. This is a very energy-intensive production (for example, 1,430 cubic meters of gas, 1,560 kWh and 660 kg of coal must be used for 1 ton of pure nitrogen). Fertilizers are produced by means of the continuous method and it is impossible to make up for lost time. Moreover, shut-downs, not to mention lower production, have a very negative effect on the condition of the machinery which has already seen a lot of use.

During the fall-winter season, when the industry should be operating "full steam" in order to accumulate as much fertilizer as possible for the spring campaign in agriculture, there were, unfortunately, standstills and the shutting-off of part of the installations. Among others, one line which produces ammonium in Wloclawek stood idle for 1.5 months while reductions also affected plants in Pulawy. In addition, it was impossible to transport prepared fertilizers and potassium nitrate, which by the way, cannot be stored, out of Pulawy because of a shortage of railroad cars. Thus, there are many obstacles--those which are traditional and new ones, which result from the current situation.

In the production of phosphorous fertilizers, the main problem is the importing of phosphorite. Currently, factories are operating by using supplies while at the same time, negotiations regarding the importing of raw materials are continuing. In January, there were shortages of ammonium in Police but the situation will improve owing to an additional delivery from the USSR. This year's production in our factories is to be aided by supplementary deliveries from abroad of--among others but with the exception of ammonium--prepared urea fertilizer from the USSR and Czechoslovakia.

However, the more distant future looks worse. Not one, new fertilizer plant has been built in the last decade and those in operation until now are "coming to an end," in a technical sense. Therefore, the most important issue now is to answer the question--how to improve the technical state of the nitrogen and phosphorous industry and how to implement renovation investments. There are at least two crucial problems which must be weighed: the securing of foreign-exchange funds for repairs as well as for the reconstruction of worn out installations which will soon be inoperational. This

concerns, for example, installations which produce potassium nitrate in Kedzierzyn and urea in Pulawy. Among investment problems, there is also the matter of completing the building of Police II. Without the accomplishment of these undertakings, it will be impossible to ensure for agriculture, the envisaged--in long-term programs--increase of fertilizer supplies to 220 kg of NPK [nitrogen-phosphorous-potassium] per hectare in 1985.

Farmers claim that at the present time, pesticide supplies are more important than an increase in mineral fertilizer supplies. Mineral fertilization, at its current rather high level, has ceased being a limiting factor for crop yield amounts. Weeds, diseases and pests have become that factor and we have nothing to combat them with and what is more--paradoxically--fertilizing even contributes to their spread (it is well known that fertilizers, especially nitrogen fertilizers help in the spread of weeds and increase crop susceptibility to diseases).

In 1977, we used up, in terms of one hectare, 0.88 kg of an active substance of herbicides and pesticides. In 1980, the amount was only 0.41. The Institute of Plant Protection [IOR] estimates that during that year [1980], we lost--as a result of neglecting protective measures--11 million tons of potatoes, about four million tons of grain and about one million tons of fruits and vegetables. Our neighboring countries use much more (2-5 kg per hectare) pesticides and herbicides. Here at home, supplies about 38 percent higher than in 1981 have been planned for the current year. Of course, this will not satisfy the needs completely but, in any case, the situation will undergo a certain improvement.

Difficulties in this area result from, above all, the fact that practically the entire [80 percent] pesticide chemical industry is based on foreign supplies of raw materials and ready preparations from the II payments area [capitalist countries]. The needs of the current year have been estimated at 367 million foreign exchange zlotys. Unfortunately, our payment capacity permits expenditures amounting to only 250 million foreign exchange zlotys including 224 million zlotys from the II payments area. Such an amount was written into the operational program. Now everything depends on whether foreign deliveries will be arriving without delay (in January, banks did not negotiate payments) and whether our factories will be on time with the processing of raw materials. In order to be used on time, pesticides must find themselves in the market network by the end of April. In mid-February, it was estimated that the degree of meeting the minimal needs of agriculture, vacillated between 40 to over 70 percent depending on the type of pesticides used. The situation changes from day to day--the race against time continues. However, there exists currently, a grave fear that in sum, the production of pesticides based on imported concentrates will not exceed, during the first quarter, 50 percent of the amount and assortment which agriculture was to receive at that time.

In order to improve the situation somewhat, a series of organizational operations was carried out, among others, the sale of preparations, which are not needed in the wintertime, was blocked; an inventory of stocks was conducted; the usefulness of expired preparations was tested; branch institutes of the

of the ministry of agriculture sent out agro-technical recommendations regarding the methods of crop protection under conditions of pesticide shortages; the chemical industry is supposed to assume the production of simple preparations, commonly used in the past, as for example, lime sulfur, Bordeaux mixture, "sulfoles," etc., which are produced from domestic raw materials.

However, all of the above are activities which only mollify present difficulties. An improvement may be expected when the pesticide industry expands (among others, a new factory must be built) for which funds are stinted for years.

### Supply of Pesticides

Warsaw GROMADA--ROLNIK POLSKI in Polish 3 Mar 82 p 9

[Text] For the past several years now, the supply of pesticides for agriculture has been insufficient. There is no sense in hiding the fact that for this very reason, crop losses each year are enormous. Pests, diseases and weeds occurring in masses destroy hundreds of thousands of tons of: grain, sugar beets, rape, potatoes, vegetables and fruits, particularly strawberries and apples.

Can farmers count on a better supply of pesticides this year? After all, the season of plant protection begins in several weeks; will the chemical industry be able to produce the necessary preparations on time and will they reach the stores in time--these questions are already worrying not only the farmers.

As for now, the situation looks bad because most of the preparations used in crop protection as well as concentrates indispensable for the production of domestic preparations are imported from abroad, mainly from the II payments area [capitalist countries]. We do not have sufficient amounts of foreign exchange currency for this indispensable but very expensive import. What are the allocations in the particular groups of agents [pesticides] (we will write about supplies for gardeners in separate informational news)?

There are considerable problems with preparations for combatting fungus diseases which are carried along with seeds. Above all, there will be a shortage of seed dressing for the pre-sowing treatment of grain, vegetable and beet seeds--especially that of dressing T which is the least expensive and the most widely sought. There is too little of Funaben and Oxafun. Specialists inform us that seed dressing supplies will barely cover 60 percent of the need; there will still be a shortage of some 800-1,000 tons of seed dressing.

For years, there have been problems with combatting grain diseases, particularly powdery mildew. There are too few herbicides for combatting weeds in grain: there will be about a 40 percent shortage of herbicides, mainly herbicidal esters such as Aminopialik produced from imported concentrates, for the extermination of dicotyledonous weeds. There will be somewhat more but still not enough, in relation to the need, preparations for combatting monocotyledonous weeds, primarily wild oats and bent grain grass (*Trietia zizania*).

There ought not to be a shortage of preparations for the deweeding of sugar beets. Supplies of Gesaprim, Gesatop and Simazina should also suffice for the protection of corn.

However, there will be problems with agents for the extermination of the potato beetle. At the present time, the needs are only about 65 percent covered. There is a greater demand for less expensive powdery preparations which the farmers usually apply themselves.

Deliveries of preparations for combatting potato blight should provide for about 90 percent of the needs. Fighting potato blight is still not a very widespread and neglected procedure in our country. For example, this year, barely 300 thousand hectares of potatoes are to be covered with protection. Although, this is a very serious disease, it is worth reminding that in 1980 it destroyed about 50 percent of the potato yield. Losses were no smaller in 1981 as well. Eliminating the disease is essential in regions of seed production as well as everywhere the disease manifests itself markedly.

There will not be enough pesticides for everyone this season. Of course, the amount that agriculture will use will depend on weather conditions which, after all, determine the degree of incidence of pests, diseases and weeds as well as the ability to carry out protective measures. However, in order to utilize the preparations as rationally as possible, it is essential to distribute and direct them in a rational fashion to, above all, those regions where the threat is the greatest; i.e., there were the occurrence of pests, diseases and weeds is greatly pronounced and may threaten with the lowering of the crop yield. The Voivodship Quarantine and Plant Protection Stations can also be of great assistance since they have the best knowledge of the region where, what kind and the amounts of preparations are needed.

There is one more matter. From 22 February, new prices have been in effect on pesticides as well. We are not going to give the detailed price list because the list of preparations is very long--over 200 preparations are used in plant [crop] protection and each one is, in addition, packaged in various containers. We are only making it known that the price of preparations has increased 88 percent on the average. However, as is reported by specialists--some preparations, among others, those which are used in the protection of grain, potatoes and beets, continue to be subsidized.

#### Supply of Fertilizers

Warsaw GROMADA-ROLNI<sup>1</sup> POLSKI in Polish 9 Feb 82 p 5

[Text] Fertilizer supplies during the 1981-82 economic year will, most likely, be lower than one year ago and one year ago things were not all that good either: 186 kg of NPK [nitrogen-phosphorous-potassium] were used on the average per hectare, although, 191 were planned. As we have been informed at the Ministry of Agriculture and Food Economy, under current conditions, thus, taking into account martial law, past strikes and problems with the importing of phosphorite from abroad, this year's level of fertilization--as compared to last year--will decrease by some 6 kg per hectare on the



average but by 11 kg in relation to the amount previously planned. The situation may yet change--hopefully not for the worse. Supplies for the first half of the current economic year, therefore, from July to December of last year [as published]--and this already being in relation to a reduced plan--have been achieved as follows: nitrogen--47 percent, phosphorous--46 percent, potash--60 percent.

In the meantime, demands for increased supplies of fertilizer are flowing in from all parts of the country and they ought to be increased because these are matters of utmost importance today. In the Ministry of Agriculture and Food Economy, it is being said that appeals should be made to the personnel in chemical factories so that nothing will be neglected and nothing will be allowed to disturb production. When I talk about this at the Ministry of the Chemical, Light Industry, it is pointed out to me that appeals being appeals but what is important is natural gas, electric energy and coal whose shortage can worsen the situation at once.

Until December, 1981, the production of fertilizers did not proceed too badly; there were supplies of raw materials. However, it is feared that the winter may disturb the continuity of their delivery. It ought to be realized that the production of fertilizers is extremely energy-intensive production. In order to produce one ton of nitrogen, 1,430 cubic meters of gas, 1,560 kWh of electric energy and 660 kg of coal are required. Meanwhile, coal supplies are small; in some factories they will last only a few days; there are also problems with gas and energy. However, winter is a good time for the production of fertilizers--the period of cold weather is conducive to productivity on condition that raw materials will not be lacking. On the other hand, it would be extremely dangerous to shut down the installations in the winter-time. A fertilizer plant has enormous amounts of circulating fluids--the cold could cause pipes to burst and bring about a great deal of damage.

Pulawy, Tarnow and Wloclawek operate, as a rule, on their own ammonium while Police produce composite fertilizers using ammonium brought in from abroad. Recently, a transport of several thousand tons of ammonium arrived in Police from the Soviet Union which should help this modern plant for a certain period of time. However, Police use up 13 thousand tons of ammonium monthly and, therefore, the supply must be adequate and continuous.

Deliveries of raw materials for phosphorous fertilizers are causing concern. We import 100 percent of them from abroad--phosphorite from Morocco and the United States and apatite from the Soviet Union. Deliveries from the Soviet Union are certain. However, the importing of phosphorite, bought primarily from the United States is causing concern while their transport from Morocco can bring many surprises in the wintertime. As a result of numerous strikes as well as storms along the coast, not enough supplies of phosphorite have been accumulated for this winter, as used to be the practice in the past. Purportedly, everything is being done so that the production of fertilizers will not be hurt.

The production of fertilizers--as also the entire food economy--belongs to a, so-called, protected zone--an industry which is of the utmost importance to

the country. It, therefore, has priority in terms of supplies of indispensable raw materials at a time when there is not enough for everyone. It appears, therefore, that "abundant harvest factories" ought not to be lacking in anything which is necessary for the production of fertilizers. I would think, however, that a lot also depends on the employees themselves in these plants, on their understanding of the situation and the desire to improve agriculture which with a diminishing production of fertilizers will not be able to feed the nation.

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MINISTER DISCUSSES TRANSPORTATION, TELECOMMUNICATIONS

Bucharest ROMANIA LIBERA in Romanian 17 Feb 82 pp 1, 3

[Interview with Vasile Bulucea, minister of transportation and telecommunications, by Cornelia Preda]

[Text] [Question] The scope of transportation and telecommunications reflects as well as determines the development of the national economy and its relations with the rest of the world. In this context, could you, Mr Minister, disclose to our readers your assessment of the results obtained in this sector during 1981?

[Answer] Transportation and telecommunications have undergone extensive development and modernization, and it could even be said that the achievements that have been obtained represent a sound basis for successfully fulfilling the objectives established in this sector by the 12th Party Congress. Economic reality has confirmed the justification of the orientation for creating a unified transportation system, and for increasing the proportion of railway, sea, and river transportation within this system. Under the present circumstances, when the world economy is dominated by the problems of the energy and fuel crisis, the guidelines provided for our country's transportation activities have led to significant advantages in consumption and costs.

The achievements obtained during 1981, the first year of the current five-year plan, are appreciable and denote an improvement in the activity of the transportation and telecommunications sector, correlated with the development of the national economy. At present, railways are the major means of domestic transportation, and the volume of goods moved by them during last year was 15 percent higher than the volume recorded during the first year of the previous five-year plan. Contributing to this, has been the greater capacity assured through electrification along 340 km during 1981, and track doubling over about 60 km in areas of dense traffic. During this period, the railways were endowed with a large number--over 140--of electric, diesel-electric, and hydraulic locomotives, and more than 2900 freight cars (four-axle equivalent).

During 1981, 10 percent more goods were transported with automotive means than during 1976 as a reference year, but in keeping with the guidelines for efficient transportation, this sector has grown less than railway, sea, and river

transportation, whose specific consumptions are lower. For instance, the volume of goods moved by river traffic was twice as high than in 1976. The endowment with river craft has continued, with 800-2400 hp tugs and 1000-3000 ton barges among the 77 new units launched in 1981. Maritime transportation has also developed, with the volume of goods increasing about 2.2-fold in five years. Last year, our maritime fleet acquired the first two 65,000 dwt ore carriers--Branesti and Bujoreni--produced by the Romanian industry, a 55,000 dwt ore carrier, the Buhusi, as well as a number of freighters of different tonnages.

Significant achievements have also been obtained in modernizing the road network, among them being the completion of the national Transcarpathian highway Baia Mare-Prislop-Cirlibaba. In telecommunications, the automatic interurban telephone system has been expanded with the connection of 20 more localities. Moreover, 60,000 new sets have been installed in automatic telephone stations, among which those in Costanta-Tomis, Ploiesti, and Suceava. In addition, we established 41 post offices and two mail distribution centers.

But the past year also concluded with a number of shortcomings, of backlogs with respect to planned levels. For instance, only 95.6 percent of the planned volume of goods was transported, and only 97.9 percent of the net production indicator--which is valuable as summary--was achieved. For railways, the backlog in the volume of transported goods amounts to 10.7 million tons, and for automotive transportation, the backlog is even greater at 19.5 million tons.

[Question] The secretary general of the party has called upon transportation workers to act in the spirit of the workers' revolutionary stringency, so as to rapidly eliminate the shortcomings in this sector, for the proper pursuit of all activities in transportation, as one of the exceptionally important conditions for the suitable conduct of economic activities. We know that this call was followed by a number of analyses by the leadership of your ministry and of its basic units. What is the major aim of the measures that have been taken, and what are their first effects?

[Answer] Indeed, the critical examination performed by the secretary general of the party, is for us an encouragement to act with high responsibility and stringency to improve the transportation activity. Immediately after the Plenary Session of November, we acted on the measures that had been previously taken, and on ways to implement their objectives. We thus established a system of daily analysis, and means for efficiently solving problems of freight car immobilization, for directing empty ones, and for repairing accidental defects, so as to increase the number of active railway transportation resources. In automotive transportation, we extended the use of the inventory in two shifts, and provided trailers for all the vehicles capable of towing. In maritime transportation, in collaboration with the Ministry for Foreign Trade and International Economic Cooperation, we establish monthly programs which will schedule the utilization of our own fleet for Romanian foreign trade goods, as well as assure--as much as possible--loads for both directions of a trip. We are devoting particular attention to the expansion of modern transportation techniques, and especially to containerization, for which we continue to provide specific resources; we have also requested a greater cooperation on the part of transportation users.

[Question] Some of Romania's largest investments are being made in the transportation sector. As part of an investigation published in our paper, we informed our readers that some objectives entered 1982 with backlogs. What is being done to recover these backlogs and to assure the fulfillment of the investment plan for this year?

[Answer] Although we have responded to the outstanding effort that the national economy has been making to allocate funds for transportation investments, with an increased concern for placing planned objectives in operation on schedule, part of the latter could not be started as planned during 1981. Among the major investments in this situation are the development of the railway network in the Giurgiu-South zone; the increased traffic capabilities for the Bucharest-Baneasa-Pasarea sector; the installation of double tracks, electrification, and widening to normal gauge for the narrow railway Mogosoaia-Otopeni; the equipment of a wharf for cement loading and unloading at the Port of Constanta; and the modernization of the Carasova-Anina DN (National Road) 58.

An analysis of 1981 year-end results and of the stage of preparations of the plan for 1982, conducted by the Executive Bureau of the Management Council of the ministry, has shown a number of shortcomings in the organization and management of some sites, in the use of available means, in the availability of qualified manpower, and in discipline. It also showed that all the necessary conditions have been met to recover the recorded backlogs during the first portion of this year, and to fully complete the 1982 plan. At the same time, a number of concrete measures were established, primarily to concentrate the available means and manpower on hastening the placement in operation of objectives that have shown backlogs. We also instituted maintenance and repair programs in January and February for all the equipment and means of transportation at the Central for Railway Constructions and the Central of the Danube-Black Sea Canal, with assignments of qualified personnel from the ministry's industrial units. The Central for Auto Transportation has allocated dump trucks to meet the demands of construction tasks. Concrete measures have also been taken to strengthen order and discipline at work sites.

During this year we will concentrate our attention on the most important objectives: the Danube-Black Sea Canal; the Babeni-Berbesti and Carbunesti-Albeni transportation lines for energy-coal; projects for the development of capabilities for coal transportation from the Oltenia coal basin; Danube bridges; and the new railway line Vilcele-Rm. Vilcea. According to the program, the first section of the Babeni-Popesti line will be opened in 1982; the other objectives mentioned above will be placed in operation during the following years of the five-year plan. We should point out that in our efforts to open the Borcea and Cernavoda bridges on the Danube, we are encountering difficulties in obtaining the metal superstructures. A recent inquiry conducted among suppliers in the machine construction industry shows that under current conditions they cannot meet the terms of their contracts for machining and delivering the superstructures. And if these units fail to deliver on time, we in turn will be unable to open the bridges on the planned dates. We are discussing at this point objectives whose completion mean the elimination of the last bottlenecks on highway 800 between Bucharest and the seashore, in other words an increase in the traffic capacity toward and from the country's largest sea port, Constanta.



[Question] Mr Minister, we will stop our conversation at this point, and will have another opportunity to discuss the service quality problems encountered by your sector of activity.

[Answer] I look forward to it.

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# SUGGESTIONS MADE FOR IMPROVING COAL PRODUCTION OPERATIONS

Bucharest REVISTA ECONOMICA in Romanian No 12 26 Mar 82 pp 12-13

[Article by H. Pincas, Z. Csik and Gh. Draghici: "Requirements for the Accentuated Increase of Coal Production"]

[Text] During the current stage, more than in any other time, special importance is being given to the development of the energy base, its better and rational use and the assurance of our country's energy independence in the near future. The full achievement of all the objectives outlined for this year, with many of them being increased compared to 1981 (the doubling of crude oil reserves in comparison to the programmed annual extraction, while for natural gases, pitcoal and lignite the reserves that are to be found will have to compensate completely for the amounts that are used in production), requires the mobilization of the initiatives and creative energies of all the factors involved, from the ministries and economic centrals to each individual enterprise.

## Increasing the Efficiency of Equipment and Complex Installations

In 1982, special attention is being given to increasing coal production, which will have to reach a level of at least 44 million tons, with significant increases being forecast for lignite. At the Political Executive Committee of the RCP Central Committee meeting held on 18 March of this year, the need for the accentuated increase in domestic coal production was once again stressed, emphasizing the especially important tasks of the mining industry in meeting the growing needs for coal in the thermal power stations and in the metallurgical industry.

In order to provide the conditions for achieving these tasks, in 1981 the Ministry of Mines and the mining combines decisively moved to the application of certain broad programs of measures that will lead to the elimination of the shortcomings that still persist in the carrying out of activities and to the better organization of production, the introduction of technical progress, the growth of labor productivity and so forth, with direct effects upon the level of economic efficiency. The principal direction of action is the substantial improvement of the conditions for using the technical equipment in the mines.

In recent years, significant efforts have been made to mechanize mining work and to modernize technologies for the opening, preparation and extraction of coal strata, with the units being equipped with high productivity and technically complex equipment of domestic production and from other countries. Currently, these units have

over 270 shaft-digging pieces of equipment and an equal number of coalface hewing equipment, for the most part representing mechanized equipment groups, 30 rotor excavators for working lignite pits, a significant number of installations for depositing waste, transportation and so forth.

Although special efforts have been made to equip the mining enterprises with modern equipment and installations of high efficiency, nonetheless their degree of use still leaves something to be desired. Thus, for the coalface hewing equipment, the available amount of time for operation was used in 1981 only approximately 82 percent of the time, while for the shaft-digging equipment this index was even lower (approximately 80 percent), under conditions where these achievements are below the 1980 levels. This situation can also be seen with regards to the intensive use indices. Thus, the average hourly productivity for the shaft-digging equipment fell from  $2.29 \text{ m}^3$  in 1980 to approximately  $2.0 \text{ m}^3$  in 1981, while in the case of the hewing equipment from 36 tons/hour to 33 tons/hour. Nor can we lose sight of the fact that for rotor excavators - a piece of equipment worth an average of 150-200 million lei and the complete technological production line for an excavator totals 600-800 million lei - not even one-half of the available work time was used, under conditions where the lost production for a single hour of not operating an excavator represents 600-700 tons of lignite.

The improvement in the use of available time by only one percent for this type of equipment would provide, for example, an additional amount of production of 300-400,000 tons of lignite per year.

Starting precisely from this state of affairs, the programs of measures to support the achievement of 1982 plan tasks contained, first of all, the specific means for intensifying uncovering projects and investment projects, speeding up the assembly of technological equipment, better using the available technical equipment, introducing advanced work technologies below the ground and in open pits, and so forth. As a result of implementing many of these measures, coal production increased during February of this year, which also permitted an increase in the daily deliveries to the electrical thermal power stations from 65,000 tons/day in the fourth quarter of 1981 to approximately 90,000 tons/day in February.

Nonetheless, for the entire sector, net coal production for the first two and one-half months of 1982 was approximately 400,000 tons below the planned levels. The most unfavorable results and the ones that caused overall coal production to fall below planned levels were those registered by Rovinari Mining Combine, where all the component units (the Rovinari Mining Enterprise with 124,600 tons, the Rosia-Pesteană Mining Enterprise with 165,000 tons and the Udari Mining Enterprise with approximately 93,000 tons) were below the planned tasks. This situation was principally due to the failure to prepare the work areas in the open pits right from the end of last year using an active reserve corresponding to the production plan and the failure to use the available technical equipment at planned levels, as well as unfavorable weather for longer periods of time.

(very low temperatures during the winter months) that caused frequent interruptions because of breaks in the high-capacity rubber conveyor belt transporters.

Looking critically at the causes that led to the incomplete use of available work time, we note an overwhelming number of stoppages and accidental repairs due to mechanical and electrical defects, either to the excavator itself or to the transportation network, as well as unscheduled technological stoppages. Naturally, this is why the first measure for improving the use of technological lines in the lignite open pits is the need to reinforce the mining and maintenance teams with personnel having the appropriate training - trained within the framework of the ministry and the mining combine or on-the-job - who, through their training, will provide the guidance and maneuvering of the installations according to the specific conditions on the job and the characteristics of the rock or coal strata. Equally important is the systematic and correct carrying out of all maintenance, overhaul and repair work, while rigorously staying within the work schedules, being supported by an appropriate material base of spare parts and materials, having the varieties needed for current demands and being stored close to the places of work in order to avoid additional stoppages of the equipment while waiting for the necessary parts to make repairs. In this area, it is also necessary to have a more substantial assistance on the part of the suppliers of spare parts (the units of the machine-building ministries) and materials, especially rubber belts for the transport conveyers and vulcanization solutions for the conveyers, where there are systematic shortages of 15 to 25 percent compared to the amounts that were contracted for.

At the same time, it is also necessary for the units of the Ministry of Mines to make increased efforts to increase their own production of spare parts and to assimilate new items needed by the extraction sector, giving priority attention to those parts that are scarce and those that are imported for hard currency from foreign markets so that, this year, the production of spare parts will increase by approximately 50 percent compared to 1980, at the same time decreasing the hard currency expenditures by 50 to 60 percent. Paralleling the increases in the amounts of spare parts, it is absolutely necessary to also concentrate efforts towards the better organization of the process of recovering and reconditioning certain parts, thus providing an additional amount of spare parts using a minimum amount of expenditures and labor.

#### Preparing the Work Areas

The growth of coal production and the increase in the efficiency of mining activities are directly tied to the improvement of the management and technical organization of the work. In this regard, it is necessary to take certain measures right from the phase of opening and preparing the pits and coalfaces for carrying out all auxiliary work (systems for draining away rain and underground waters, access roads and transportation routes, water supplies and power systems, work areas and so forth). At first glance, these projects seem less important and, for reasons of shortening the start-up timeframes for new

facilities and achieving certain savings, they are easily subjected to certain simplifications, delays and temporary solutions. These "solutions" sometimes, however, backfire during mining operations, causing losses that cannot be compared to the "gains" achieved during the construction phase.

There are sufficiently frequent cases where excavating and transport vehicles get mired and stuck in mud and water, there are interruptions in the supply of water, electricity or pneumatic air to the work areas, and there are equipment breakdowns, long-duration maneuverings and so forth. These things, as well as others, have direct impact upon the quality of the coal that is extracted and delivered to the consumers. Thus, because of the high amount of rock in the coal the thermal power stations each day lose significant electrical and thermal power production capacity. It should be pointed out that the electrical power reductions in the thermal power stations using coal total 700 to 800 MW, an amount equal to an annual production of approximately three billion kwh of electricity. This is merely an example that illustrates the undesired effects, stemming from the poor organization of production, on the quality of raw materials, on the degree of use of the equipment and installations and, in the end, on the production of the user enterprises.

More than that, there are cases where there is no close follow-up on the achievement of a balance between the types of equipment used and the specific geological-mining conditions in each mine (the thickness and angle of the strata, the hardness of the rock, tectonic characteristics and so forth), which brings about, in addition to a reduction in the amount of production capable of being achieved, a decrease in the projected economic efficiency. For 1982, we are forecasting that, on the basis of a better correlation of production with the types of equipment being used, the extensive and intensive use indices will increase by 10 to 20 percent compared to 1981 for combines, while for rotor excavators the level of use of the available amount of time will reach, on the average, 60 percent (compared to the 49 percent achieved in 1981). For some excavators, it is even necessary to increase the degree of using time and the average hourly capacities by over 50 percent (at the Gîrla, Tismana, Rovinari Est and Lupoaia open pits).

In addition to this, it is also necessary to have a greater effectiveness in the on-time completion and start-up of the new production facilities outlined for this year, such as those for pitcoal at the mines in Petrila-Sud and Cimpul lui Neag in the Jiu Valley, those at the open pits in Pesteana, Tismana, Jili Sud, Rosia de Jiu and Rovinari Est, the mines at Urdari and Tehomir in the Oltenia and Horezu-Vilcea coal basin, and so forth, which together must provide an increase in production of three to four million tons of coal. To this end, it is necessary to accelerate the work to open and prepare underground mines and to uncover the open pits so that the volume of rock excavated in 1982 will exceed the amount of cover removed in 1981 by over 55 percent, representing an additional amount of rock excavated and transported to the rock piles totaling approximately 30 million cubic meters. In order to achieve this impressive amount of excavation work, we must speed up the work to assemble



the six new rotor excavators located at the assembly points in the open pits in Oltenia. An important role in this work is also being played by the Ministry of the Machine Building Industry, the main supplier, which must speed up the production and delivery of the missing subassemblies and parts, stay within the agreed-upon work schedules concluded with the user and adhere to the order of deliveries in accordance with the order of assembly.

#### Priority Objectives, Directions of Actions

In order to increase coal production to the established levels and recover the shortfalls recorded for the first 2 months by the end of the year, as well as in order to accelerate the extraction and delivery rates, the following must be kept in mind:

1. Supplement the necessary workforce with over 11,000 people by June of this year. Paralleling this action, they will have to provide the places for room and board and the appropriate equipment, especially at the Rovinari Mining Combine, which will absorb approximately 85 percent of the total numbers of additional workforce in order to: fill-out the existing work groups, thus ensuring the operation of all technical excavation and transportation lines used to move the waste from the uncovering operations and the lignite out of the pits, in around-the-clock operations; fill-out the existing work groups and create new groups at the coalface, in opening and preparation work and in other underground work.

2. Increase the degree of using the technological equipment by: having the mining enterprises ensure the necessary measures for increasing the operations time at the lignite pits at Rovinari and Motru to 65 percent of the available time compared to the 60 percent that is listed in the plan (and the 47.6 percent achieved in 1981). To do this, it will be necessary to have a systematic movement of the workers established in the standards approved by the ministries to all the technological lines in the lignite pits, as well as the reassignment of the coordinating technical personnel necessary to the appropriate operation of the equipment in the continuous operation schedule; ensure the uninterrupted management and maintenance of access roads for the large pieces of equipment and transporters, principally the main roads out of the Rovinari Mining Combine and the Motru Mining Combine; train the personnel needed for the technological lines that are to be put into operation this year so that they will be assigned to equipment work area, at the time of the move from the assembly points or when technological tests are conducted on the high capacity transporters.

3. Improve the operation of the high-capacity conveyor belt transporters by: improving the quality of the rubber belts and having the chemical enterprises regularly deliver the necessary amounts of rubber belts having textile inserts and steel cords and the plastic materials and adhesive solutions, replacing worn belts that are no longer safe to use in operations and having the machine-building ministries make graduated deliveries, beginning with the second quarter, of the approximately 30 vulcanizing presses for the high-capacity rubber-belted transporters, on the basis of the recently approved prototype.

4. Carry out repairs to the technological equipment within the timeframes established in the schedules and effectively correct accidental defects. In order to carry out these operations, it is necessary for: the Industrial Central for Petroleum and Mining Equipment to take adequate measures to immediately start production on spare parts and subassemblies, on the basis of the orders sent out by the Rovinari and Motru mining combines; the Ministry of Mines and the Rovinari and Motru mining combines, with the help of the Ploiesti Industrial Central for Petroleum and Mining Equipment, to ensure without delay the precise achievement of the schedule to prepare the mechanized coalface hewing equipment that is located in the motor pool so that, this year, 13 coalface hewing pieces of equipment (4 at Rovinari and 9 at Motru) will be put into operation.

5. Improve the quality of the coal that is delivered. This requires the mining enterprises to improve the work technologies in the pits and below ground for the purpose of reducing the waste rock content in the extracted coal and to install sorting-filtering installations in all mines. To this end, they must ensure the construction and soon-as-possible start-up of the four installations that will crush the coal and eliminate foreign objects at the open pits in the Gorj basin, maintain in operating order the coal crushers on the rotor excavators for the purpose of eliminating the supergranulation of the coal that is delivered, as well as carry out all the work to clear and drain the water from the open pits, so that the uncovering work and the clearing away of the waste rock over the coal strata can be carried out under the best possible conditions.

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## BRIEFS

RADIOTRANSMITTER FOR COMMERCIAL SHIPS--One of the new products in mass production in the Enterprise for Electronic Measurement Devices and Industrial Devices is the R-6401 radiotransmitter-receiver. This apparatus, which operates on the ultrashortwave band, is intended for commercial ships. The 55 international channels and 10 private channels, its operation both in simplex and complex system, its sensitivity below one microvolt, and its adjustable broadcasting power ensures radiocommunication between ships and ports, on rivers and on the sea, regardless of the conditions of the dissemination of the radio waves. Produced under conditions of high reliability, the new device satisfies the requirements of the "Romanian Naval Registry," "The Regulation on Radiocommunications" and "The Convention for the Protection of Human Life." It should be mentioned that this apparatus represents the result of collaboration between the enterprise and the ICSITE [Scientific and Industrial Research Institute for Electronic Technology], the specialized institute and that it is already in demand by customers and eliminates the need for imports. [Text] [Bucharest INFORMATIA BUCURESTIULUI in Romanian 7 Apr 82 p 3]

PARTICIPATION IN JOINT VENTURE--Decree No 55 of 12 February 1982 approves the participation of the "Navlomar" foreign trade enterprise in Bucharest in the establishment, together with the firm SERSHIP COMPANY LIMITED, with headquarters in Beirut (Lebanon), of the SELMAR CORPORATION joint company for international maritime transportation, a stock company with limited responsibility, with headquarters in Monrovia, Liberia. The company will execute trade operations in connection with the acquisition and technical and commercial use of maritime transport ships. The social capital of the company is 5,000 U.S. dollars and the share of participation of the "Navlomar" foreign trade enterprise in the capital is 50 percent, 2,500 U.S. dollars. [Text] [Bucharest BULETINUL OFICIAL in Romanian Part I No 24, 1 Mar 82 p 1]

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